

THE
PETITION
OF
ELIZABETH EMMONS AND BROTHERS,
ONLY
HEIRS OF URI EMMONS,
FOR LEAVE TO APPLY TO THE
COMMISSIONER OF PATENTS
FOR THE
EXTENSION OF THE PATENT OF URI EMMONS,
FOR HIS
IMPROVEMENTS IN PLANING MACHINERY.

NEW YORK:
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1856.

EMMONS PETITION.

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THE PETITION
OF
PHINEAS EMMONS AND OTHERS,
HEIRS OF URI EMMONS,
FOR LEAVE TO APPLY TO THE
COMMISSIONER OF PATENTS,
FOR THE EXTENSION OF THE PATENT OF URI EMMONS
FOR HIS IMPROVEMENTS IN PLANING MACHINERY.

*To the Honorable, the Senate and House of Representatives in
Congress assembled :*

The petition of ELIZABETH, WILLIAM and PHINEAS EMMONS, the next of kin to the late URI EMMONS, late of the City of New-York, deceased, respectfully represent that they, together with their brother, BENJAMIN EMMONS, who is now absent from the country, are the only surviving heirs of the said URI EMMONS deceased.

That heretofore, that is to say, in the year 1823 or 1824 the said URI EMMONS did devise and construct certain machinery for planing with rotary cutters, but at that time said machine was not perfected for planing boards ; but the said URI did from time to time thereafter continue to perfect the same, and that on the 25th day of April, 1829, letters patent of the United States were granted in due form to the said URI EMMONS, for new and useful improvements in the mode of planing floor plank, and in grooving, tonguing and straightening the edges of the same, &c., &c., as upon reference to said letters patent and the specifications and drawings thereof, will appear, a copy of which is hereto appended marked No. 1.

Four months prior to the issuing of the above named patent, to wit, on the 27th day of December 1828, one WILLIAM WOODWORTH did obtain letters patent of the United States for a planing machine for planing wood, metal, brick, &c., which, in some particulars, resembled the machine of the said URI EMMONS, both employing a cutting cylinder therefor. A copy of the drawing and specification of this machine as patented by WILLIAM WOODWORTH is hereto appended marked No. 2, but neither that patent or any machine built in accordance with it contained all of the most important features found in the EMMONS patent. The striking difference between the two machines will appear obvious on an inspection of the drawings and specifications of the two hereunto appended.

In the patented machine of URI EMMONS, there is a mode of *feeding the boards through the machine*, without the use of a carriage on which the board was fastened, by employing instead of said carriage, *feed rollers*, between which the board is fed forward to the cutter; while in the WOODWORTH machine the carriage was a necessary element described and represented. The advantage of the *feed rollers* over the carriage is, that the boards as they succeed each other, require no fastening or unfastening in the machine, and they succeed each other in a continuous series without stopping the operation; whereas, if a carriage was used after one board was run through the machine, the operation of planing must stop till the carriage is run back, thus losing nearly or quite half the time. In the Woodworth machine the carriage had to be set up toward the planing cylinder to determine the thickness of the board, the cylinder itself being in stationary bearings. In the Emmons machine as described in his patent, the *planing cylinder was hung in movable or sliding boxes* which could be set to any distance from the roller that supported the board while under the action of the cutter. Another feature of importance first found in the Emmons patent, is the *guide strip* for guiding and directing the board through the machine, against which the board was pressed and held by a spring roller; the feed rollers were also made to press

or pinch, or hug the board by bearing upon or against it with springs or weights. None of these features are to be found in the machine described and patented by Mr. Woodworth in 1828. It is a well known fact, that no planing machine has been constructed for planing boards under the patents of either Woodworth or Emmons since the year 1829, in which the seed of Emmons has not been introduced, as well as his mode of hanging the cylinder and his guide strips. These were the invention of Emmons and were not known or used previous to his invention, and without them it is not too much to say, that the Woodworth planing machine, so called of the present day, would be worthless. For a confirmation of these facts, your petitioners respectfully refer to the Emmons patent, and to the testimony of Thomas B. Stillman, Prof. James Renwick, Jas. St. John, manufacturer of planing machines, J. H. Gedney, engineer and superintendent of planing machines, Prof. J. J. Mapes, M. A. Cox, Wm. Kemble, West Point foundry, and Calvin Emmons and others, heretofore filed with the committees on patents, to which may be added from the report of the chairman of the committee on patents, of the 1st session 32d Congress, report No. 156 House of Representatives, the following extracts in which he says, "For the first few years, as shown by the affidavits filed by W. W. Woodworth to obtain the first extension (of the Woodworth patent,) the machine was a practical failure; that a successful planing machine was invented and patented by Uri Emmons; and that Woodworth succeeded by subsequently incorporating Emmons' invention with his own, some years after the date of his patent." From all these facts your petitioners submits that Emmons did invent most material and important features of what is now known as the Woodworth planing machine. Your petitioners do not wish to underrate the merits of William Woodworth as an inventor, nor do they mean to discuss the question of his rights, further than to show the distinct and important ground covered by the invention of Uri

Emmons, independent of the devices found in the patent of Woodworth.

The same report to Congress from which we have before quoted, further states, "the fact is undisputed that the valuable features of the present Woodworth machine, were *first described* in the patent of Uri Emmons. The fact is also "undisputed that Emmons' assignees would not permit his "improvements to be incorporated in Woodworth's machine, "until Woodworth obtained their consent by uniting with "him in a mutual and equal partition of the whole country "between them. The fact is undisputed, that since the introduction of the features of the Emmons patent into the "Woodworth machine it has become *successful and valuable*." Such is the disinterested evidence given by the enlightened committee of the House of Representatives after a laborious and careful investigation of all the facts, the history of which may be briefly summed up.

Both Emmons and Woodworth, after their patents were granted, (or rather the assignees of Emmons and Woodworth and others,) mutually assigned to each other their respective inventions dividing the territory between them; they acknowledged each other's rights and respected them, and it is not for us to draw any distinction between their merits which they themselves did not recognize at the time when all the facts were before them. But since the death of both the patentees, the speculators who possessed the monopoly of Woodworth's patent, not content with the rights conferred thereby, have seized upon and monopolized that of Uri Emmons, and have for the last twelve or thirteen years had substantially, the exclusive benefit thereof; and although the Emmons patent has expired, the public have never had the benefit of it, but it has been practically monopolized by those who work under the Woodworth licenses, thus, not only has a great wrong been done to the heirs of Uri Emmons, but the public have been excluded from its use as effectually as if the patent still existed in full force. In addition to this they have attempted to cast odium upon his name by calling

his patent a fraud. At the time of the expiration of the patent of our brother Uri, who was then deceased, our brother Calvin applied for its extension. He was poor, and could not afford to employ proper legal aid, and wholly unacquainted with the customs or requirements necessary to a successful issue. Under these circumstances it is not strange that he failed to obtain the extension of the patent, notwithstanding the great merit. He was strenuously opposed by the owners of the Woodworth patent, who by crushing this extension, were enabled to use Uri's invention gratuitously, while they could exclude the public therefrom by the patent of Woodworth. They came into the field with able counsel and ample funds, and waged successful war against this poor, unfriended, but meritorious applicant, and were enabled to cast sufficient *technical* doubt around his case to make him abandon the field to his adversaries. The result was, that two of the three commissioners then by law having the matter of extensions in charge, refused to extend the patent; from this decision the Commissioner of patents dissented. He who had most thoroughly investigated the matter, and from whose position the clearest insight into the case could be obtained, knew that our brother had rights that ought, in justice and equity to be maintained. The correctness of his views are made more clearly conspicuous from the fact that both the other Commissioners, Mr. Webster and Mr. Penrose subsequently, when it was too late for them to act, gave a certificate addressed to Congress in effect repudiating their former decision against the extension, as will be seen in their appended certificate, No. 3, of the accompanying papers, as also opinion of Commissioner Ellsworth.

Since that time Congress has, in its wisdom, transferred the powers and duties of that board to the Commissioner of Patents alone. Had such been the law at the time of Calvin Emmon's application, the grant would have been made and the necessity of further action by Congress would have been superceded.

From the foregoing, it will appear that Woodworth and

brother Uri Emmons were, as clearly appears from their own acts, as well as those of their compéers, equally entitled to reward for their meritorious inventions, they neither, at the time of uniting the two patents, November, 1829, accused the other of fraud, but gladly accepted the services each could bring, and agreed to make common stock of them. Since then both have died. The patent of Woodworth has been twice extended for a term of fourteen years in all, during which the owners have amassed millions of dollars, his heirs have been enriched, and they still petition for more; while the heirs of Uri Emmons, the equally meritorious co-laborer in the field, have languished in poverty which has been aggravated by the exertions heretofore made by our brother and father to recover what they saw they were so justly entitled to. Calvin, brother of your petitioners and of Uri Emmons, died under the distress brought upon him by "hope deferred," and exertions beyond his strength and means made to recover the property with which he hoped to comfort our aged father and mother's declining years. And after him came our old father begging for relief, till his means were all exhausted, and he, too, passed away in the city of New York in May of last year, and was finally indebted to the city for a place of burial.

It may be argued that the *present* re-issued patent of Woodworth, *describes* the devices patented by Uri Emmons. This is true; but they were not described in Woodworth's original patent, and even in his re-issued patent those parts invented by Uri Emmons (on which the extension is now asked,) are merely described therein as more perfect mechanism, but were not claimed as the invention of Woodworth. No such claim was made by the representatives of Woodworth before the patent office, or by Woodworth himself when living.

The inventor of these valuable devices, Uri Emmons, never did, as has been clearly shown by the documentary evidence before the committees of Congress, receive any adequate remuneration or reward for his services. He was never even fairly paid for the necessary expenditure of time and money

he devoted to this invention; and his heirs languishing in poverty have failed to obtain any remuneration for his most meritorious invention; not from any fault on their part, for they have struggled on without means, devoting their utmost endeavors to obtain justice. Almost every Congress has been petitioned on the subject, committees have reported favorably, and the Senate has passed a bill that failed for want of time to go through the House.

Many patents have heretofore been extended or renewed by Congress after the term of the grant had expired, as will be seen by reference to the accompanying list:

Oliver Evans' patent for improvement in flour mills, was renewed after the expiration. Approved 21st January, 1808.

John Adamson's patent, renewed after expiration for 14 years. Approved 2d March, 1831.

Samuel Bowring, patent of November 24, 1814, renewed for 14 years, after it had expired. Approved 3d March, 1831.

Samuel Parker, patent renewed by special act after expiration, 3d March, 1821.

Thomas Blanchard, patent renewed after the expiration for 14 years. Approved 30th June, 1834.

Blanchard's patent of 1819, renewed six years after expiration. Act approved 6th February 1839.

Mr. Blanchard had one patent extended twice for 14 years each time, in all 42 years.

R. Eastman's patent 16th March, 1820, was renewed after it had expired.

James Barron's two patents were renewed subsequent to their expiration. Act approved 2d July, 1835.

William Gale, patent renewed by an act of Congress. Approved March 3d, 1843, by suspending that part of the act of 1836, that prohibits a renewal by the Commissioner of Patents after the expiration of a patent.

Samuel K. Jennings, patent, 1814, renewed for 14 years by an act approved March 3d, 1843, *15 years after the expiration of the original patent.*

In all these cases the public had had full possession of the

invention during the time between the expiration of the patent and its renewal; but this has not been the case with the invention of Uri Emmons, the public have never been able to use it on account of the monopoly exercised over it by the owners of the Woodworth patent, but it has been employed by the heirs of Woodworth or those holding license under his extended re-issued patent.

Your memorialists seek for nothing but what strict justice and equity entitle them to, desiring the most rigid investigation into all the facts connected with the case. They therefore pray that an act may be passed authorizing the Commissioner of Patents to entertain their application for a revival and extension of said patent of Uri Emmons, for the benefit of themselves, their heirs and assigns, for improvements in planing machines, upon the same terms as if said patent had not expired; and if after a due investigation of the facts, under all the rules and restrictions now governing applications for extensions of patents, it shall be found that the said invention of said Emmons embraces improvements which, in justice and equity would have originally entitled him to an extension, the Commissioner of Patents shall extend the same for seven years, from a date not earlier than 27th of December, 1856; and that the said patent so extended, shall have all the effect in law that it would have had if the same had been extended before the original term had expired for which said letters patent were granted; or grant such other relief as may seem just and proper.

In closing it may be proper to remark, that no opposition has been heard of by your petitioners to this extension, except from the proprietors of the Woodworth patent. There seems to be so far as has been ascertained by your petitioners, a universal acquiescence in the equity and justice of their claims.

ELIZABETH EMMONS,
PHINEAS EMMONS,
WILLIAM EMMONS.

State, County and City of New-York, to wit:

Elizabeth Emmons and Phineas Emmons, the two of the aforesaid petitioners who reside in the city and county of New-York aforesaid, being duly sworn, say that they have been informed and believe to be true, the statements embraced in the foregoing petition, which are not within the deponent's own knowledge; and that the other matters therein set forth, and which have come under the knowledge of the deponents, are strictly correct and true, and further say not.

ELIZABETH EMMONS,
PHINEAS EMMONS.

Sworn to this 5th day of

May, 1856, before me,

GEORGE G. TAYLOR,

Com. of Deeds.

URI EMMONS' LETTERS PATENT.

DATED APRIL 25, 1829.

The schedule referred to in these letters patent and making part of the same, containing a description in the words of the said URI EMMONS himself, of his improvement in the mode of planing floor plank and grooving and tonguing and straightening the edges of the same, planing boards, straightening and planing square timber, &c., by machinery, at one operation, called "THE CYLINDRICAL PLANING MACHINE."

The machinery for this improvement consists, 1st, of a frame of wood or metal. 2d. The gear and fixtures combined and connected together for the above named operation, the principle of which consists in running the plank, boards or timber over, under or at the sides of a cylinder of wood or metal on which knives are placed straight or spiral, with the edges exactly corresponding with each other, having from two to twelve knives or edges; also, burrs or saws similar to those used for cutting teeth in brass wheels, to groove and tongue the edges of the boards or plank as they pass through between rollers or on a carriage by the surface of the cylinder. The shape, form and construction of the above principle may be varied in shape and position, dimensions, &c., &c., still the same in substance, the same principle producing the same effect. I have by experimental operation, found that the following mode or form is the best. 1st. A frame composed of two pieces of timber, from 12 to 18 feet long, about 6 by 10 inches broad, placed about 15 inches apart, framed together with four girths, one at each end, and at equal distances from the centre and flush with the under side. This frame is supported by posts of a proper length, framed into the under side of the above pieces of timber, and braced so as to be of sufficient strength to maintain the operative parts. There is placed a roller in the centre, of metal or hard wood, across the frame, the surface of the roller being even with

the surface of the frame. Directly above and parallel with this roller, is hung the cylinder made with two or four spiral edges or knives, 6 to 10 inches diameter, and hung on a cast steel arbor resting in movable boxes attached to the sides of the frame, so as to set the cylinder up and down from the roller, to give the thickness of the timber to be planed. On each side of the cylinder, is placed a pair of feeding rollers, of hard wood or metal, the under one of each pair being level with the centre one, the upper ones are hung in boxes which are pressed down with springs or weights, so that when the timber comes between them, they will hug and carry it through. These rollers are connected and turned by wheels, at a velocity of about 12 feet surface of the roller per minute, the cylinder with two edges to make about 2500 revolutions per minute, cutting 5000 strokes every 12 feet. This can be varied according to the number of edges, power and velocity of the different parts. The power is attached to the cylinder by a belt running on a pulley on the outward end of the cylinder shaft. Each way from the feeding rollers is placed rollers about two feet apart for the timber to rest on while running through; on one side of the frame is fastened a straight edge to serve as a guide, lined with metal; on the other side rollers are placed in a piece of timber which is pressed up to the plank or board to keep it close to the guide or straight edge by a spring. The grooving and tonguing is done by burrs or circular cutters similar to a saw; these burrs are hung on perpendicular spindles, the arbors of which rest in boxes attached to the inward side of the frame, a burr on one side to cut the groove, and on the other is placed two burrs just as far apart as the thickness of the above one for cutting the groove. At or near one end of the frame is hung a shaft with a drum or rollers, from which belts pass into pulleys on each spindle of the burrs or circular cutters, which must have about the same velocity of the cylinder. These burrs are placed on one side of the cylinder opposite to each other, so as to cut the tongue to match the groove. On the other side of the cylinder is an arbor paral-

lel with the cylinder, on which is placed circular cutters for planing the edges of the boards or plank as they pass through. The cutter on the side next to the guide is stationary on the arbor, the one opposite is movable on the arbor, but fastened with a screw to set it for different widths. A belt runs from a pulley on the end of the arbor outside the frame to the said drum, as also the same from the cylinder, each having about the same motion. The feeding rollers are put in motion by a belt from a slow part of the driving power. I have also put in operation a carriage for feeding, but rollers save the time of running the carriage back.

Now, what I, the said Uri Emmons consider and *claim* as my improvement, and for which I solicit a patent, is as follows, viz :

1st. The principle of planing boards and plank with a rotary motion with knives or edges on a cylinder placed upon the same, straight or spiral, as before described, which I put in operation at Syracuse, in the county of Onondaga and State of New York, in the early part of the year 1824.

2d. The Burrs for grooving and tonguing in contradistinction from the mode used by William Woodworth, he using duck-bill cutters.

3d. The feeding by running the timber through on a carriage, or between feeding rollers, guided by a straight edge as before described ; also the circular cutters for straightening the edges before described.

In testimony that the foregoing is a true specification of my said improvement as afore described, I have hereunto set my hand and seal, the eighth day of April, in the year of our Lord, one thousand eight hundred and twenty-nine.

URI EMMONS.

Witnesses,
THOMAS THOMAS,
SILAS HATHAWAY.

"Patented April 25, 1829."

THE UNITED STATES PATENT OFFICE.

To all Persons to whom these Presents shall come, Greeting:

This is to Certify, That the annexed is a true copy from the records of this office, of the specification of letters patent issued to Uri Emmons, bearing date the twenty-fifth day of April, eighteen hundred and twenty-nine.

In testimony whereof, I, Charles Mason, Commissioner of Patents, have caused the seal of the Patent office to be hereunto affixed this third day of May, in the year [L.S.] of our Lord, one thousand eight hundred and fifty-six, and of the independence of the United States the eightieth.

C. MASON.

UNITED STATES PATENT OFFICE.

To all persons to whom these Presents shall come, greeting:

This is to certify, that the annexed is a true copy from the files of this office, of the drawing illustrating the patent issued to Uri Emmons, on the twenty-fifth day of April, eighteen hundred and twenty-nine.

In testimony whereof, I, S. T. Shugerl, acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto [L. S.] affixed, this sixteenth day of April, in the year of our Lord, one thousand eight hundred and fifty-six, and of the independence of the United States the eightieth.

S. T. SHUGERL.

State of Massachusetts, county of Suffolk, ss.

On this second day of October, A. D. 1841, personally appeared before me, Richard Urann of Boston, in the State of Massachusetts, and made solemn oath that he is interested as an assignee in a planing machine, for which letters patent of the United States were granted to Uri Emmons on the twenty-fifth day of April, 1829 A. D., and that the accompanying drawings are, as he verily believes, a true delineation of the invention described in the said letters patent.

Signed,

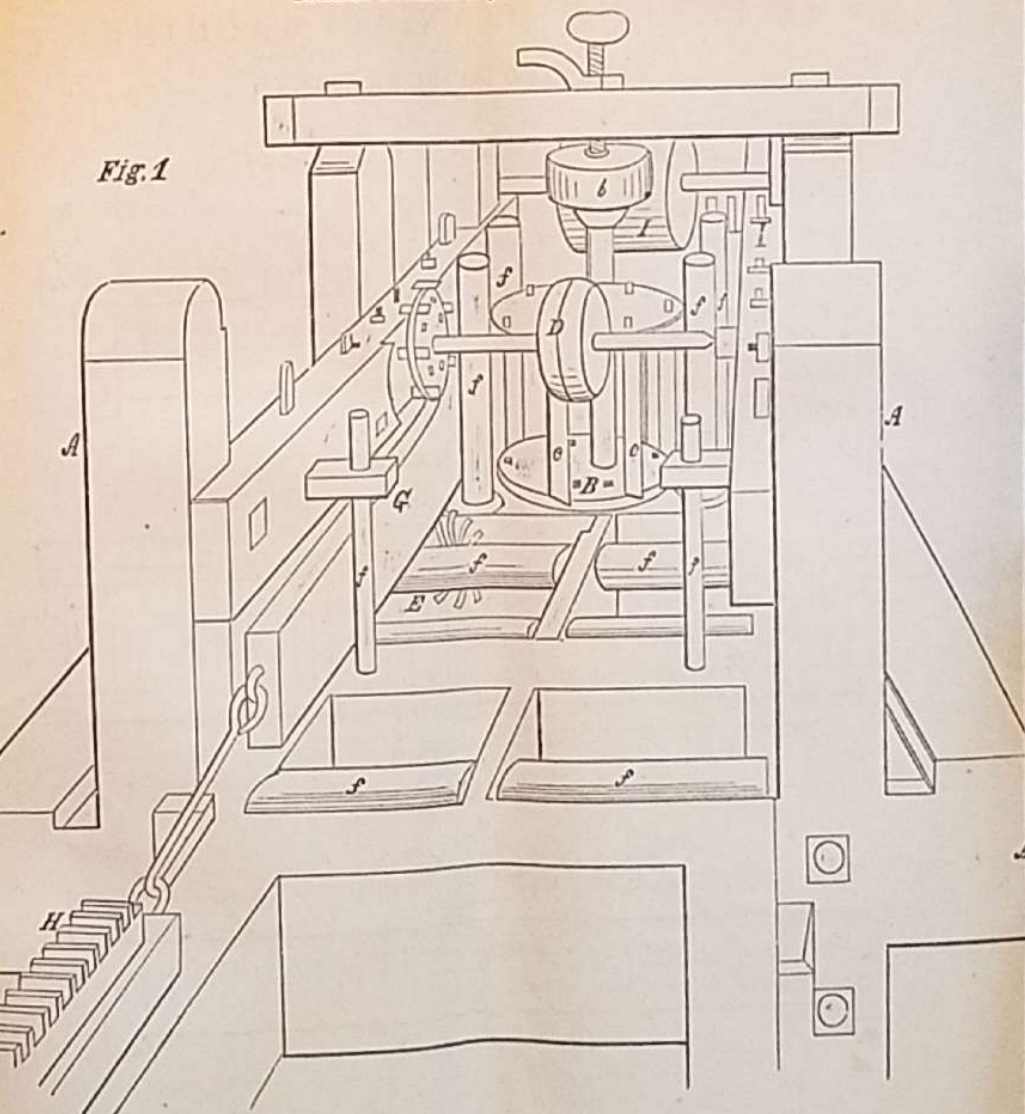
R. H. EDDY, *Justice of Peace.*

REFERENCES EMMONS' PATENT.

- a a*—Pieces of timber or rails of frame.
b b b—Girths of do., by which they are fastened together.
c c—Parts of frame. *d d*—Braces of posts. *e*—Central roller.
A—The cylinder from six to ten inches in diameter.
f f f—Knives of do., represented in figures 4 and 5 as straight edges, and in figures 6 and 7 as spiral edges.
g—Cast steel arbor or shaft of cylinder.
h h—Movable boxes or bearings of do., attached to sides of frame.
i i i—Feeding rollers, the under one of each pair being level with the central roller.
k k—boxes for supporting the upper feeding rollers.
l l—Weights which press down the boxes *k k*.
m n—Connecting (geer) wheels of the feed rollers.
o—Pulley on the cylinder shaft.
p—Belt which gives motion to pulley *o*.
q r—Rollers for the timber to rest on while running through the machine.
s—Straight edge which serves as a guide.
t—Metallic lining of the straight edge.
u u—Rollers on a piece of timber *v*.
v—Piece of timber which is pressed up to the plank or board by a spring *w*.
x—The burrs for grooving. *y*—those for tonguing.
z B—Perpendicular spindles of do. do.
C D—Boxes in which the arbors of the spindles rest.
E—Shaft having a drum or roller *F*, from which belts *G G* pass to pulleys *H H*, on the spindles of the tonguing and grooving cutters.
I—Shaft or arbor which carries the circular cutter *K K*, for planing the edges of the boards.
L—The set screw of the movable cutter *K*.
M—Pulley which yields motion to the shaft *I*.
N—Belt which drives the pulley *M*.
O—Belt which drives the feeding rollers.
P—Connecting belt of the feeding rollers.
 Figure 1 represents a top view of one of the burrs. Figure 2 represents a side view of one of the tonguing burrs. Figure 3 represents a side view of one of the grooving burrs. Figure 4 cross section of cylinder with straight knives, figure 5. Figure 7 represents cross section of cylinder with spiral knives, figure 6.
 For above seven figures [not shown here,] see patent office certified copy.

Copy of the original Drawing of W. Woodworth's Patent now in the United States Patent Office.
Patented December 27, 1828. (Certified.)

Fig. 1



THE UNITED STATES PATENT OFFICE.

To all persons to whom these presents shall come, greeting:

This is to certify, that the annexed is a true copy from the files of this office, of the drawing of the letters patent issued to William Woodworth for a planing machine, on the twenty-seventh day of December, eighteen hundred and twenty-eight.

In testimony whereof, I, S. T. Shugerl, acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, [L. S.] this twenty-first day of April, in the year of our Lord, one thousand eight hundred and fifty-six, and of the independence of the United States the eightieth.

S. T. SHUGERL.

 WOODWORTH REFERENCES.

This is a double machine with the planing or moulding cylinder vertical. A single machine with the cylinder horizontal, will be simpler and less expensive.

A A &c., a strong frame. b Pulley near the top of the arbor of the cylinder. B the planing or moulding cylinder. C C Knives of the cylinder. D Pulley on the arbor of the tonguing or rabbeting wheel. E grooving wheel. f f f f &c., Rollers. G Carriage to which the plank or board to be planed, is fixed. H Rack by which the carriage is moved. I Drum or pulley for the belt that drives the cylinder.

 PATENT OFFICE, November 13, 1843.

This is copied from an official copy, bearing date 29th day of December, 1828, which was duly restored under the act of 3d of March, 1837.

A. L. McINTIRE, *Draughtsman Patent Office.*

[No. 2.]

THE SCHEDULE

REFERRED TO IN THESE LETTERS PATENT,

And making part of the same, containing a description in the words of the said WILLIAM WOODWORTH himself, of his improvement in the method of planing, tonguing, grooving, and cutting into mouldings, or either, planks, boards, or any other material; and for reducing the same to an equal width and thickness; and also for facing and dressing brick, and cutting mouldings on, or facing metallic, mineral, or other substances.

The plank, boards, or other material, being reduced to a width by circular saws, or friction wheels, as the case may be, is then placed on a carriage, resting on a platform with a rotary cutting wheel in the centre, either horizontal or vertical. The heads or circular plates fixed to an axis, may have one of the heads movable to accommodate any length of knife required. The knives fitted to the heads with screws or bolts; or the knives or cutters for moulding fitted by screws or bolts to logs, connecting the head of the cylinder, and forming with the edges of the knives or cutters, a cylinder. The knives may be placed in a line with the axis of the cylinder, or diagonally. The plank or other material resting on the carriage, may be set so as to reduce it to any thickness required; and the carriage, moving by a rack and pinion, or rollers, or any lateral motion to the edge of the knives or cutters on the periphery of the cylinder or wheel, reduces it to any given thickness. After passing the planing and reducing wheel, it then approaches, if required, two revolving cutter wheels, one for cutting the groove, and the other for cutting the rabbits that form the tongue; one wheel is placed directly over the other, and the lateral motion moving the plank or other material between the grooving and rebreating wheels, so that one edge has a groove cut the whole length, and the other edge a rabbit cut on each side, leaving a tongue to match the groove. The grooving wheel is a circular plate, fixed on an axis with a number of cutters attached to it, to project beyond the periphery of the plate, so

that when put in motion, will perform a deep cut or groove parallel with the face of the plank or other material. The rebrating wheel, also of similar form, having a number of cutters on each side of the plate, projecting like those on the grooving wheel, cuts the rabbits on each side of the edge of the plank, and leaves the tongue or match for the groove. By placing the planing wheel, axis, and cutter knives vertical, the same wheel will plane two planks or other material in the same time of one, by moving the plank or other material opposite ways, and parallel with each other against the periphery of the planing or moulding wheel. The groove and tongue may be cut in the plank or other material at the same time, by adding a grooving and rabbiting wheel.

Said William Woodworth does not claim the invention of circular saws, or cutter wheels, knowing they have long been in use; but he claims as his invention, the improvement and application of cutter and planing wheels to planing boards, plank, timber, or other material; also his improved method of cutters for grooving and tonguing, and cutting mouldings on wood, stone, iron metal, or other material; and also for facing and dressing brick: as all the wheels may be used single and separately for moulding, or any other purpose before indicated. He also claims as his improved method the application of circular saws for reducing floor plank, and other materials to a width. Dated Troy, December 4th, 1828.

WILLIAM WOODWORTH.

Witness,

HENRY EVERTS,

L. S. GLEASON.

"Patented December 27, 1828."

THE UNITED STATES PATENT OFFICE.

To all Persons to whom these Presents shall come, Greeting:

This is to Certify, That the annexed is a true copy from the records of this office, of the specification of letters patent

issued to William Woodworth, bearing date the twenty-seventh day of December, eighteen hundred and twenty-eight.

In testimony whereof, I Charles Mason, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this third day of May, in the year [L.S.] of our Lord one thousand eight hundred and fifty-six, and of the independence of the United States the eightieth.

C. MASON.

[No. 3.]

OPINION OF COMMISSIONER OF PATENTS.

[*On File of Senate Committee on Patents.*]

[EXTRACT.]

"In the matter of the application of Emmons, for the extension of a patent granted to his brother in April, 1829, I remark upon the evidence, which is very, and as to some points, contradictory.

It appears that in December, 1828, William Woodworth took out a patent for a planing machine. That in April following Uri Emmons took out another patent embracing the general principles of the same, both parties deposited drawings and specifications, by which it appears what each party claimed at the time—and these drawings with the specifications must be referred to as far better evidence than the recollections of witnesses as to transactions so remote. It appears, by the evidence, satisfactory to me, that Emmons did, as early as 1823 and 1824, erect *two* certain machines at *Syracuse* for planing and straightening edges of plank. As to grooving them at the same time, the evidence is not so clear, and the method which Emmons claimed for grooving a buzz-saw is instead of cutters, as claimed by Woodworth. It appears that Emmons was poor, and had solicited aid in his experiments—that when he heard that Woodworth had got a patent in December, embracing *his*, Emmons' invention, that he started for Washington, and exhibited to Dr. Jones, then superintendent, his claim, and sustained by affidavits of sundry persons, showing that *he* was the inventor; avowing his determination to contest the matter with Woodworth.

A patent was granted to Emmons covering the general principles embraced by Woodworth, with other material arrangements, especially the mode of feeding the cutter with *boards* themselves by means of rollers propelled by bands; also a plan of elevating and depressing the machine to suit different thicknesses of boards, both of which are important, as is proved by subsequent adoption. Mr. Emmons took his

patent, went home, published a caveat, and litigation commenced. A mutual examination was made by the two patentees and those interested; affidavits were furnished to show what Emmons' operation was at Syracuse, and an arrangement entered into perfectly satisfactory. Both parties claimed the merit of invention, and doubtless both were meritorious, and they divided the benefits, and hence they and their assignees became alike interested in both patents in respective portions of the United States. By this arrangement both parties are to be equally sharers in the benefits of all improvements and *renewals*. Great sales were made throughout the United States; the machines built were by common parlance called "Woodworth's Machine," though embracing the benefits of both. * * *

I make another remark, viz: that the machines now in use are constructed essentially on the arrangement proposed by Emmons and not Woodworth. Indeed Mr. Kemble, at the head of the Novelty Works, and Mr. Stillman, both eminent machinists, say unhesitatingly that after a critical examination of the drawings and specifications of Woodworth and Emmons, as admitted to be genuine copies of original patents, that Emmons' was the best and is the one on which *machines are now erected*. To this may be added the testimony of Samuel Johnson, who says, the one built by Woodworth at Dry Dock did not operate well or equal to expectation, and that in forty or fifty machines constructed, which he had seen in New England and elsewhere, all embraced the arrangement of Emmons and not one that of Woodworth—the one at the Dry Dock excepted. Hawkins, Brady, Wood, and Fry's depositions all confirm this statement so far as to show Emmons' to be the best plan and one adopted. If the whole testimony introduced is carefully viewed, it will appear that witnesses swear that machines could be made from Woodworth's specifications. Some swear that the machines in use are like Woodworth's specification. If, however, a strict examination is had of the specification and drawing it will appear that Woodworth (remark the fact)

uses rollers to carry up the plank to the knives, but it is only by taking the carriage along with it, that is the rack and pinion or rollers will move up the carriage which bears the boards to be planed, whereas Emmons' has geared rollers to take up the *plank alone* with great ease and dispatch. This is used on machines called Woodworth's, but is not his invention. Persons looking at a machine prepared for operation, and then looking at Woodworth's drawing and specification, might reply: yes, it looks like Woodworth's invention; whereas if you separate the rotary *cutter*, which Woodworth does not claim, and take away the mode of adjusting the machine to the thickness of the board, also the straight edge, all which Emmons claims, and which Woodworth does not in his specification—what remains, the peculiar grooving, to which I think Mr. Woodworth is entitled, and this is important.

Mr. Emmons states in his specification what ways he had tried, and which found best. Quere, could he have done this on the spot, immediately after hearing of Woodworth's patent, unless he really was a meritorious inventor?

Mr. Woodworth is entitled to merit for his efforts in introducing the machine, and for some arrangements in gearing and other minor matters, but he has received a very large sum, while Emmons has received but \$1000. I am willing to view both parties as equally meritorious, for the decision of the present case, in which the public have a deep *interest*.

I make this remark in consequence of the numerous letters of *alarm* I received at the Patent Office, from the worthy mechanics who have, at great expense, set up the machines in different parts of the country, under the express authority both from *Woodworth* and Emmons, and now, since Woodworth's patent is extended, are called upon by his administrator to stop the machines under threat of injunction, unless compromised.

The shops of the mechanics, from Maine to New Orleans, have been personally visited by Mr. Woodworth and his attorney—great alarm is felt—many have been frightened

into a compromise. I say frightened, because there is no doubt on one point, that those who have erected machines under the two patents have a right to *use* the same machine most unquestionably. Whether assignees have a right to go and sell further, has been questioned by others, rather than myself. Besides the agreement by Woodworth and Emmons was expressly that each other and their assignees should have the benefit of all improvements and *renewals*, and hence I consider the great hardship of compelling the sometimes poor mechanic to pay again, without the *least consideration*, for running his machine. The ground as claimed by Woodworth, that this Board have essentially decided in favor of the originality and peculiar merit of his machine over Emmons' by extending Woodworth's patent. Such is the impression, and hence the power which may be (in urgent hands) used to compel compromises. BUT SUCH IS NOT OUR DECISION. Mr. Woodworth is admitted to have merit, and his case is extended; the same may be done for Emmons, and since Woodworth's has been extended, I entertain no doubt, if we consider the public good, the peace and quiet of present owners of machines, that it will be best to extend Emmons' also.

This course will undeceive the public mind as to the decision of the Board, as to originality of invention between Woodworth and Emmons, and leave them *exactly where they have placed themselves*.

It is too much for either party now to disturb the peace and quiet of honest purchasers under the compact of the two original patentees—a compact made while both parties were in full vigor of life, able to examine the matter; but both are now dead, and the present claims and controversy is set up by the administrators respectively for the benefit of heirs and legal representatives.

If the Board should feel embarrassed by the decision of extending Woodworth's case, I would remark, that those who came forward to oppose Woodworth *withdrew upon a compromise*, except Mr. Emmons, who understanding that the Board

did not intend to go into the merits of *originality*, left the city before a decision.

Each one stands on its own merits, with new parties (for there are other parties opposing here beside Woodworth)—a great deal more of testimony is introduced, on which we now decide. It would be expected of this Board, constituted as we are, to examine minutely into disputed *originality*. But in cases where there was no original invention, this Board ought to reject, because there was in fact no invention. This should be a clear case. But here there has been from the first the most manifest assumption and maintenance of superior merit. There was a time for Woodworth and Emmons to have settled their rights by a judicial decision—this neither would do. It is too late now to claim an over-carehing in the compact, in which so many bona fide purchasers are interested.

It is urged by those opposing this extension, that Mr. Emmons has sold his interest. Mr. Woodworth did the same, with a very trifling exception of a few counties. Besides, in this case, as by the agreement of the parties, a renewal was contemplated and provided for, as will be seen by the compromise between the parties, who stipulate that the renewal shall enure for benefit of assignees. In such cases, if the Patentee, who is not compelled to extend, chooses to do it by a consideration to be paid him, may he not do it, and thus get remuneration?

I close by observing, that both Mr. Woodworth and Emmons appear to have invented enough to sustain a patent, and though their claims were made too broad, yet by disclaimers they can reduce them to what they can sustain. I entertain no doubts but it will be better for Mr. Woodworth himself to have both patents extended, for certainly there is much in the machines now in use that is not embraced in his father's patent. A continuance of present rights might satisfy the otherwise complaining, and thus prevent litigation, which, if Emmons' application is rejected, will undoubtedly spring up to cover over all anticipated profits or remunerations.

H. L. ELLSWORTH."

April 25, 1843.

COPY OF PAPER PRESENTED TO CONGRESS.

[ORIGINAL ON FILE IN THE SENATE OF THE UNITED STATES.]

To the Honorable the Senate and House of Representatives of the United States:

"In the matter of the proposed revival and extension of the Letters Patent of April 25th, 1829, issued to Uri Emmons, for his invention of a Cylindrical Planing Machine.

The undersigned, two of the members of the Board in the matter of the extension of patents, under the Act of the 4th of July, 1836, do certify that the evidence now produced by Mr. Emmons, an applicant for the extension of Uri Emmons' Patent for a planing machine, was not before the Board on a former occasion, when they decided to extend the patent of William Woodworth for a planing machine, and when the parties who first opposed the extension of that patent withdrew their opposition.

That the Board then decided on the evidence before them, and it is but just to say that the decision then made ought not to be taken as evidence against the application of Mr. Emmons to Congress, if it can be established that the three particulars in which the Emmons Machine differs from the Woodworth Machine are the invention of Emmons, that they are of public utility, and that he was the original inventor.

In witness whereof we have hereunto set our hands, this 20th Feby., 1844."

(Signed,) CHS. B. PENROSE,

(Signed,) DANL. WEBSTER.

New York, April 22, 1856.

W. P. N. FITZGERALD, Esq.

Dear Sir :—Being aware of your extensive knowledge and large experience of patent affairs we desire to consult you on the subject of the Patent of our brother, Uri Emmons, for improvements in Planing Machines, before attempting further to urge its renewal upon Congress.

We know that you was an examiner in the Patent Office at the time the subject of this extension was first agitated before the Commissioner of Patents and the other members of the Board of Extension, and that you were then, and have since been, conversant with the history of the case and its merits, as well as with those of the Woodworth extension. We therefore desire your candid opinion as to the claims of the heirs of Emmons to an extension and as to the probability of success.

The heirs—like the inventor—are poor and do not wish to hazard the slender means which might be contributed by friends, without well grounded hopes of success. We probably shall not be able to command funds to secure your services in advocating the extension if we should conclude to urge it, but hope to be able to compensate you for the trouble of writing us your opinion.

Yours Respectfully,

ELIZABETH EMMONS.
PHINEAS EMMONS.

New York, April 27th, 1856.

Yours of the 22nd inst. in relation to the extension of the Planing Patent of Uri Emmons, was duly received—and I take the earliest opportunity which previous engagements allow to reply.

I was an Examiner in the Patent Office from January, 1840, to July, 1852, and from that time to the present have been practising as Counsellor at Law in Patent Cases. While in the Patent Office I had charge of the class of Planing Machines,

and since have been of Counsel in important cases, involving careful investigations of the Woodworth and Emmons inventions; and no man perhaps has had better opportunities of learning the history of Planing Machines.

I am, therefore, and have been, familiarly acquainted with the inventions of Woodworth and of your brother, Uri Emmons, connected with the art of planing boards by machinery. I regard both these inventions as possessing very great merit, viewing that of Woodworth as interpreted by the Courts and Patent Office. The idea that they embraced only trifling improvements upon the planing machines of Bentham, Bramah, Muir, and others of early times springs from bias or a superficial knowledge of the subject. Bentham was perhaps the first to suggest that boards might be planed by machinery driven by power, and laid down principles upon which he thought the object might be accomplished which were, in *general*, correct, so far as they went; and Bramah and a few others developed to some extent these principles under different forms. It is also true that some of these machines were capable of useful application to the planing of thick pieces of timber—and to a limited extent were so applied; But it has been a hundred times established before our Courts, and other tribunals—and is too notorious to admit of dispute at the present day among any acquainted with the subject of planing—that plank, and boards—embracing nearly the whole field of lumber planing—boards as they came from the mill, varying from each other in thickness—and each varying in thickness more or less at its different parts—and in a warped and winding form, from seasoning—were never practically—satisfactorily—or profitably planed and reduced to uniform thickness by machinery until the introduction of the improvements made by Woodworth—and Emmons—and this notwithstanding the continued efforts of ingenuity for nearly forty years after the inventions of Bentham. If a careful comparison of all former inventions with those of Woodworth and Emmons—if a hundred verdicts of juries, and judgments of the Courts of the highest dignity, in cases contested, many of them without regard to expense and

with the most unlimited investigation—if the expending of half a million of dollars in the most skillful manner to establish the contrary, *without success*, prove anything, the above fact ought no longer to be considered *by Congress*, or the public, as the legitimate subject of dispute.

It is readily admitted that a *few boards* might be selected out of a large lot, which might be properly reduced and planed by machines as previously constructed, but even among those which appeared susceptible of being thus planed, there would be many whose cross grains, knots, difference of hardness at various points, &c. &c., would cause the planing or reducing to be unsatisfactory, or the boards to be torn to pieces and the machine broken up. To what purpose would it then be to introduce into any lumber yard a machine for so limited a use; especially when it would cause more loss by destruction of lumber and breakage of itself than all its work would be worth?

Such machines could never be admitted into practical use. Courts and juries have often decided that in the Woodworth machine is found for the first time the combination of a cylindrical cutter—the cutting edges on the convex sides thereof with a yielding pressure roller in front of it and as near as may be. This roller is held against the board with great force by means which allow it to yield so as to adapt itself to the varying thickness of the boards—but its pressure is sufficient to spread out flat, warped, and winding boards or plank, immediately in front of the cutter and hold them down so that the cutter in taking off the chips or shavings, shall not draw the board up—but shall leave the board, as it planes and reduces, the thickness of the distance of the cutting edges from the bed. The rotary cutter is capable of reducing to any degree necessary—that is, it can take off a *large* or *small* portion of the thickness of the board, as may be necessary to bring the board to the thickness required—and it cuts upward from the planed to the unplanned surface, so as to avoid striking into the “grit” on the surface of the board which would destroy the edge of the cutters or plane irons.

Again, this pressure roller in pressing the warped or winding

board out flat, placed its edge in proper position to receive the action of the tonguing and grooving cutters, in proper line, or at proper distances from the two surfaces of the board, and to some extent held the board from lateral movement, so that the tongues and grooves were cut proximately to the proper depth.

These are exceedingly important improvements over what had been previously done, improvements which gave to the planing machine a power and capacity, and freedom from derangement it had never before possessed, and was one great step in advancing it to the degree of perfection which it soon after attained by the invention of Uri Emmons, and which completed all that was necessary with greatly increased speed, efficiency and perfection, to plane and reduce boards with all the imperfection upon them derived from the irregularity of the saw, the setting of the log, seasoning, knots, cross grain, &c., to uniform thickness, and rendered it of ten thousand times more value and importance to the public than all that had been done by inventors in that department previous to that time.

It is maintained that the combination of the yielding pressure roller with the surface and edge cutters, is *found* for the first time in the Woodworth machine. It is, however, proper here to state that it would be impossible to say from a drawing of Woodworth's patent of 1828, that there was a *yielding* feature in the pressure roller therein; but it has been decided by numerous juries to have been in his first machine at the time, and I do not wish to raise a question on that point. It is however perfectly certain that it was in the Emmons machine patented about three months after, as appears by the drawings of said patent; and Woodworth or Emmons first made this combination, so that jointly to Woodworth and Emmons, or to Emmons alone, was due the honor and emolument of improvements thousands of times more important and valuable than all that had preceded them in this branch of the arts. But this part has so often been awarded to Woodworth, that I think it useless, and perhaps unjust to claim it for Emmons, and therefore for the purposes of this opinion, yield it fully to Woodworth. In 1845, the old patent of Woodworth was surrendered

to the patent office, and upon *prima facie* testimony claims were granted to these combinations in the re-issued patent.

But notwithstanding the important steps Woodworth is said to have taken in adapting the planing machine to general use, it was still very defective. The board in Woodworth's machine was placed upon a carriage preparatory to planing, was necessarily fastened to said carriage by dogs, and then the carriage and board were passed under the cutters to be planed or reduced. After the carriage had been drawn through, the board must be liberated from the dogs of the carriage, taken off the carriage, run back to its former position, and another board dogged upon it. All this time the process of planing is suspended. Again, when the board was bent, being urged forward by pressure at its end farthest from the cutter, it would double and break, and often when at first straight it would do so; and when very much warped or twisted, it was extremely difficult and often impossible to dog it in proper position or make it lie properly on the carriage, and thus, even if it went through, when the last end began to approach near to the pressure rollers, it was flattened down, splintering the end of the board, or breaking and bending the dogs, which would cause delay for repairs, or injure the board and often both. These and other practical inconveniences rendered the operation so slow, injured or failed to carry through so many boards, and caused the loss of so much time, &c., &c., that the Woodworth machine constructed before the grant of the Emmons patent, and the development of his improvements, was found to be well nigh useless, and was in danger being abandoned.

But the improvements of Emmons removed all these inconveniences, and made the planing machine substantially what it is at the present day, a machine saving millions annually to the people of this country alone, and is the only planing machine now in extensive use in Europe, where Bentham, Bramah, Muir and others made their inventions in planing, and strove for years, without success, to render them useful.

The means by which Emmons obviated the inconveniences to which the Woodworth machine was subject, consisted prin-

cipally in devising and introducing a mode of carrying the board to the cutter by *rollers*, dispensing with the carriage entirely. These rollers being placed in pairs near the cutters, the upper ones held down by weighted levers, but capable of adapting themselves to the varying thickness of the boards, and a rotary motion being given to them, presented the most perfect, simple, and least objectionable mode of forwarding the board that was ever devised. Boards however bent, warped or twisted or however knotty, shaky or otherwise imperfect, could be carried forward with almost equal facility and perfection, and that, too, *continuously*; thus saving the time of dogging, undogging, removing the board and running back the carriage; also the delays caused by accidents incident to Woodworth's very defective mode of feeding, and the loss of lumber by breakage, and it will easily be seen that plank or thin boards which could not be dogged upon a carriage like Woodworth's in such a manner as to be satisfactorily planed, could be carried forward by the Emmons feed rollers and planed with perfect ease. The mode of carrying the board forward, combined with the cutters, and the rest for the board directly under the cutters, was an invention second in importance to no other in the history of planing lumber. Without it, nearly all the *practical usefulness* of the planing machine would have been wanting, and hand labor would have successfully competed with it.

Emmons also devised and introduced side or edge pressure upon upon the board while being dressed, to ensure accuracy in the depth of the grooves and tongues on the edges of the boards; he also conceived and introduced an adjustment of the planing cylinder, such that it could with great convenience be adjusted so as to reduce boards or plank to any desired thickness, which was substituted for Woodworth's clumsy and inconvenient adjustment of the bed or carriage.

It is unnecessary to dwell upon every improvement made by Emmons, but it is sufficient to state what is perfectly notorious, that so great and obvious were the improvements made by him, that when they appeared, the Woodworth machine as previously constructed, was at once abandoned, and the machine has ever

since been constructed with Emmons' improvements. So great were they, that when Woodworth and those interested with him saw and examined them, they were willing to give the right to use Woodworth's improvements for the right to use those of Emmons, and in that way the matter was adjusted between them, and thus was a machine ushered into use which annually saves millions to the public.

To depreciate the merit of those whose genius and exertions have done so much for their country and for mankind, by saying that their discoveries were very "simple and trifling," and that "any body" might have done the same thing, and giving the *principal* merit to those who produced the previous abortions which successively sunk under the weight of their own worthlessness, manifests as much of bad taste as of injustice. While we all enjoy the benefits of these inventions, we might at least give credit to those who conferred them upon us. While we are reaping a rich harvest, where another has sowed, and sunk to the grave under the weight of his labor and poverty, we might, at least, speak respectfully of the sower, and avoid a sneer while we are taking the bread from the mouths of his starving children.

Allowing that the inventions attributed to Woodworth are equally meritorious with those of Emmons, both are indispensable to the planing machine, and it would be difficult to set too high an estimate upon either. It is perfectly notorious that Woodworth did not invent the features which I have above attributed to Emmons. The charge against Emmons of stealing these improvements from the machine of Woodworth at the Dry Dock, in New-York, is perfectly absurd, because it is notorious that they *were not on that machine*; and it is perfectly clear that Woodworth would never have built that machine as it was built, if he had known how to build like Emmons'. He adopted Emmons' plan as soon as he knew it and obtained the right. He never pretended to have invented Emmons' improvements, but on the contrary was willing to give half his own patent for a half of Emmons'. The stories of fraud have been since got up by those interested in the Woodworth patent,

but I am not aware that even they have ever seriously pretended that Emmons stole the feed, the side pressure, or the adjustment of the cutter-stock; but they have made so much noise about the *pressure bar* invented by Woodworth, not being on the Emmons machine, and have so lauded its importance, that they have made it seem as if there was nothing else of importance in Emmons' machine. Emmons undoubtedly invented the machine as he patented it, although the pressure roller may first have been produced by Woodworth. A compromise was made. It does not appear that Emmons ever after insisted on his pretensions to be considered the first inventor of that, but those who have been contending against the Woodworth patent have made that claim to defeat that patent.

It is perfectly clear that neither Emmons nor his heirs have derived any profit from his invention. Poverty has always been the obstacle. He was compelled to sell for a song at the beginning, by poverty—death soon followed. His heirs have always been destitute of the means of either properly bringing the matter before the Board of Extensions or Congress, though they have constantly made all the efforts in their power—and two of them have died in the cause.

There never was, in my judgment, a more meritorious claim to Extension laid before Congress—Some Committees have reported in its favor, and I think it has once passed the Senate, but could not be reached in the House. Pecuniary means to cause it to be properly pressed upon Congress, and the attention of members sufficiently called to it to understand its merits have always been wanting—and members are too busy to give attention to such cases unless their minds are drawn to them by competent persons having the business in charge. The Woodworth patent has been *twice* extended because it was *ably and carefully presented* so that members had the opportunity to understand the merits of the case.

Nothing in my opinion has hitherto prevented the extension of this patent except the want of means to lay it properly before the tribunal having jurisdiction of it, and I am satisfied that if well presented now, it will be successful. Committees and members should be made to understand that *you are no*

asking an extension on anything which has heretofore been patented to Woodworth—but only improvements to which he never laid claim, and which are not claimed even in the re-issued patent of 1845. That all that is found in Emmons' patent which has been adjudged and secured to Woodworth is entirely waived.

Congress is frequently influenced towards refusing extensions by the fact that the public have long been in possession of the right and are extensively using it; but this circumstance cannot properly weigh against the present case because the public have not had it in use. It has been practically monopolized by those holding under Woodworth. The inventions of Emmons have been so blended with those of Woodworth that holding the Woodworth patent has virtually held that of Emmons—so that the grant of the Extension will take nothing from the public which they have heretofore enjoyed.

As I have before remarked, this case in my judgment has commanding merits and I believe nothing but a clear understanding of these by Congress is necessary to procure for the suffering heirs of Emmons the justice which has so long been denied.

In the foregoing opinion, I have not felt it my duty to encounter the conflicting opinions or prejudices existing in regard to the fact whether Woodworth was, or was not, the inventor of the features claimed in the re-issued patent of 1845, and have therefore refrained from expressing any personal opinion on that subject—I leave it as it has been left by the Courts—But if Woodworth did make those inventions, his patent was in my judgment richly entitled to the extensions which have been granted.—But I think there can be no doubt that Emmons was the first to make the improvements above attributed to him—and as such first inventor, his patent ought to be extended—even for fourteen years from the time of granting the same.

Yours Respectfully,

W. P. N. FITZGERALD,

Counsellor at Law in Patent Cases.

TO PHINEAS & ELIZABETH EMMONS.

J. J. GREENOUGH'S OPINION.

I have carefully examined the papers connected with the case of the heirs of Uri Emmons, relating to his patented planing machine, and many of the facts therein are confirmed by my own personal knowledge. From the documents and testimony, it is clearly established that the inventions of Mr. Emmons are very important adjuncts of the present cylinder planing machine, without which it would not possess a tythe of the value it now does.

A brief history of facts is this. The necessity and value of machinery for planing boards had been discussed as early as the last century, and several machines had been devised for the purpose, with a more or less practical value; cylinders for planing had been patented in England as early as 1793, and in France in 1817. In this country there were eight patents granted for planing machines prior to 1828, some of which were operative, but none of them had sufficient practical value to continue in use. In December, 1828, the patent of Wm. Woodworth was granted, which has become celebrated from the great amount of litigation it has been the cause of, and the large sums which have been realized from its use. This was followed a few months later by a patent granted to Uri Emmons, on the 25th April, 1829, and no cylindrical planing machine has been made since that time, of any practical value, that did not embrace the important features first described in this last named patent; the most important and novel of which is feeding the boards through the machine by feed rollers, and dispensing with a carriage, by which a large portion of the time required to work the machine, (that would be lost where a carriage was employed in running it back,) is saved. In all the previous machinery patented in Europe and in this country prior to 1829, a carriage was employed, which clearly shows that dispensing with it was not an obvious or easy transition. Woodworth in 1828, like all his predecessors, described it, and used it in his experimental machines till after the invention of Emmons to dispense with it was patented. Then he readily acknow-

ledged the great value of the inventions patented by Emmons, and not found in his own machine, by uniting the patents, and dividing the territory between them. These two inventors, or rather their assignees, agreed to harmonize their mutual interests, and divide the territory, as appears from the records.

In these two cases I consider that the most valuable part of the invention was made by Emmons, as by his discovery he probably saved the Woodworth machine from the fate of its predecessors, and gave it the stamp of great public utility and value, for there can be no doubt that if no other feed but the carriage had been introduced, the planing machine would still be among the unsolved problems of practical invention. Mr. Emmons, beyond all question, first devised the method of feeding boards through the cylindrical planing machine, by means of feed rollers, so that an endless feed could be kept up, and the machine be made to plane without cessation. Another important device invented by Emmons, and first found in his patent, is the guide strip and spring, for guiding the board through the machine; and a third device is so hanging the cylinder as to be adjusted to any thickness of board or plank to be planed. These are probably the most meritorious devices ever made in machinery for planing boards, since the first idea of planing by a rotary cylinder for the purpose of reducing planks to a uniform thickness was suggested.

The history of the success of the two inventions since the term for for which they were united, and the death of both inventors, has been widely different. Neither of the inventors did, during the original term of their patents, obtain any adequate remuneration for their inventions; they were swallowed up and monopolized by speculators, who availed themselves of the necessities of the poor patentees, and obtained and profited by the results of their labors. At the termination of the Woodworth patent, it was extended for seven years, and has been subsequently extended for seven years more. The patent of Emmons was not extended, owing, as

clearly appears by the evidence of the Commissioners themselves, to a want of proper management, arising probably from ignorance and poverty on the part of the heirs, and first administrator of Emmons.

The devices of Mr. Emmons, owing to the peculiar state of the case, have really all been devoted to the exclusive use of the heirs of Mr. Woodworth, and that by the act of government, owing to the acknowledged mistake of high executive officers; while the immediate heirs of Mr. Emmons, friendless and unaided, have languished in poverty, being unable to even use the devices of their relation, or obtain any remuneration therefor.

This state of facts is of course not even handed justice. One of the parties to a great invention, adding millions to the national wealth, have failed, not through any neglect on their part, to obtain remuneration for the outlays required in making the invention, while the other parties, no more meritorious in any particular, have been enabled by the acts of government to reap a bountiful reward, raising the proprietors to wealth by its means, aided most materially by this same invention of Mr. Emmons, which they have been enabled to monopolize along with that to which they were entitled.

It will be impossible for Congress now to put the heirs of Uri Emmons on the same level in equity as those of William Woodworth have attained to; but if their case can be taken before the Commissioner of Patents for extension on the same grounds as it would have come before him but for the expiration of the patent, it will afford the heirs the opportunity of getting a fair hearing, and strict justice in accordance with the statute law. The only special legislation necessary being, to free the case from the limit of time which now stands as a bar to the prosecution of their rights.

J. J. GREENOUGH,

Counsellor at Law,

No. 6 Wall Street, New York.

SYNOPSIS OF AFFIDAVITS

Filed in the Senate and House of Representatives, &c.

THOMAS B. STILLMAN, of the Novelty Works, New-York City, in his affidavit, states that he has compared the drawings and specifications of Woodworth and Emmons, with the cylindrical planing machines in general use, and that there is a material difference between the machines described in the specification of Woodworth and the machines in use—that Woodworth describes a *carriage* moved by rack and pinion, for the purpose of feeding the machine, &c.; and that Emmons specifies a materially different machine from Woodworth; that the following features which are *not* described by Woodworth are described by Emmons, namely, the *movable boxes* for raising and lowering the planing cylinder to accommodate different thickness of stuff to be planed; the *feeding rollers geared together in pairs*, the upper rollers pressed down by springs or weights. *The straight edge* or guide strip also connecting and combining the several parts with the *main driving drum*.

That the cylindrical planing machines in general use do not conform with the Woodworth specification, but that they do resemble and conform with the Emmons specification in their principle, construction and mode of operation, with the exception of some minor additions not specified by either Woodworth or Emmons; that Woodworth machine tongues and grooves, but leaves the edges rough, whereas Emmons' machine planes the edges smooth; that the mode of feeding the boards through the machine by means of feeding rollers, combined with the straight edge for guiding the board in a straight direction, as described and illustrated by Emmons, constitutes an entirely different principle in the combination of machinery from the method of feeding by carriage as described by Woodworth.

PROFESSOR JAMES RENWICK states in his affidavit that both Woodworth and Emmons use a planing cylinder and groover and tonguer, that the latter are not alike; that otherwise the

Woodworth and Emmons respective patents are unlike, that Emmons' has *feed roller, movable boxes* for planing cylinder, *straight edge, driving drum*.

JAMES ST. JOHN of firm of Fry & St. John, machinists, Eldridge street, New York, made an Emmons planing machine in the summer of 1829, under the care and superintendence of Uri Emmons, and which when done, was found perfect and complete for use, not requiring one dollar expense in altering or repairing; that *movable boxes, guide strip, feed and pressure rollers and driving drum*, were used in the Emmons machine; that they were not used in the Woodworth machine; that he subsequently in 1829, repaired the Woodworth machine at Dry Dock; that it had *carriage, vertical cylinder, &c.*

JONATHAN H. GEDNEY, of Mamaroneck, N. Y., was employed by Woodworth & Strong to superintend and run a planing machine, and had charge of one at the Dry Dock, N. Y., from January, 1828, to October of same year; that it had a vertical planing cylinder, a *carriage* to feed the machine moved by *rack and pinion*, supported by friction rollers. And in summer of 1829, he saw an Emmons planing machine at Fry & St. John's shop, Eldridge street, New-York, and that the two machines were materially different. That *Woodworth used no feed rollers from January 1829 to October following*, in the Dry Dock machine; that the original specification of Woodworth in 1828, corresponded with the Dry Dock machine; and that the machine at Fry & St. John's shop, which he saw in the summer of 1829, corresponded with the Emmons specification, and that the Woodworth and Emmons machines were materially unlike.

PROFESSOR J. J. MAPES states that he has examined the two patents, specifications and drawings of Woodworth and Emmons respectively, that Woodworth provides for a *carriage* to feed the machine; that there is no provision made for variation of thickness of boards, &c.; that it is not properly shown how the carriage is to be moved back and forth; that Emmons uses *feed rollers* driven through the intervention of cogs and pulleys, controlled by weights and levers, adjustable

to any thickness of stuff; that in Woodworth's machine there is no arrangement for adjusting the planing cylinder for different thicknesses, &c.; that Emmons uses *movable boxes* to support the journals, and that in E's machine the cutters for reducing the boards to uniform width are upon the same shaft, but in Woodworth's machine they are on separate shafts; that in Emmons' machine is a *straight edge* adjustable to suit the cutters as they wear away; that the Woodworth machine is different; that in the Emmons machine all parts derive motion from *main drum*; that Woodworth does not show how the several parts are moved; that such parts as are alike in the two machines are differently arranged and combined.

W. A. Cox, assistant editor of American Repository, and consulting engineer concurs fully in the affidavit of Professor Mapes.

THOMAS W. WOOD, (engineer,) affidavit. Had owned several of Emmon's planing machines, and examined more than thirty; that Emmons uses *feed rollers, guide strip* adjustable, *movable boxes, main driving drum*, which Woodworth does not describe; that the parts peculiar to the Emmons machine if taken away, and the arrangements of Woodworth substituted, that two men could not do one half as much work with it then, as one man can do with the Emmons improvement in the same time; that all the machines he ever saw, contained the parts and combinations peculiar to Emmons' patent.

WILLIAM KEMBLE, West Point Foundry, corroborates substantially the foregoing, as also William Emmons, junior.

On file at the Patent office are numerous affidavits touching this case, among which are, namely:

JAMES TOMPKINS of Hudson, states that he assisted in working the first machine for Woodworth; that it was made with rack and pinion and carriage movement.

THOS. B. STILLMAN states that if he had been shown an Emmons specification and drawing, he would have supposed it represented a Woodworth planing machine.

To which could be added many affidavits not on file but in possession of your petitioners, as James Murray, Civil and Mechanical Engineer, Baltimore; N. Sawyer, Alfred Duvall, Mechanical Engineer, Maryland; Daniel Dunbar, who constructed the first machine at Hudson, states that it had a carriage, and no other mode of feeding was contemplated or could be employed; that he also constructed a planing machine for Woodworth in 1836, which was patented by Woodworth; that the first planing machine he ever saw that had feeding rollers, was one which he was informed was purchased of Mr. Schenck, which was previous to 1836; that Woodworth did not use feed rollers in the machine of 1828, but did use them in his patent of 1836, to which your petitioners could add numerous others, all going to establish the statement set forth in the accompanying petition, &c.

The testimony of Messrs. Woodworth & Strong, the co-proprietors of one half of the Woodworth patent, which was filed at the patent office upon the application of Woodworth for renewal of the patent, may be considered of itself sufficient evidence of the difference of the inventions as claimed. The following extract (see Woodworth memorial 1855, page 37 and 38.)

"Expenditure and loss in further experimenting and putting up and running two other machines at the Dry Dock in the city of New York, the first machine not being strong enough," &c.

Loss in further experimenting and putting up and running two other machines in Bedford street, New York, (the two machines at the Dry Dock not succeeding.)"

"Loss in building two machines with metallic straps or belts for propelling plank, which failed in being useful."

"Four years labor and services in experimenting and perfecting machines," &c. Johnson's testimony, (Woodworth memorial, page 34,) is, that he helped to build the first machine, which was subsequent to 17th July, 1828; so that it would appear that Woodworth did not complete his machine till 1832, near four years subsequent to the date of the Emmons patent.

JAMES ST. JOHN'S AFFIDAVIT.

I, JAMES ST. JOHN, of the city, county and State of New York, depose and say: I am a machinist by trade, and was engaged in that business in partnership with Samuel Fry, as early as 1828, in the city of New York. I am well acquainted with the cylinder planing machines now in use, and generally called the Woodworth planing machine. The first cylindrical planing machine on this plan of which I had any knowledge was made at the shop of Fry & St. John, under the superintendence of Uri Emmons, at No. 87 Eldridge street, New York. The patterns for this machine were prepared by Emmons at his own shop, and he had the castings made therefrom and brought to our shop for finishing. This machine was commenced early in the summer of 1829, and finished the last of July or beginning of August the same year. When finished it was removed to Nixon & Son's shop on the same street, for the purpose of a trial by steam power; it was there tested and was found to be so perfect in its operation as not to require the expenditure of a single dollar for alteration.

The machine was made according to the description in the patent granted to Uri Emmons, on the 25th of April, 1829. It was made with a cylinder having but two spiral knives upon it, and the plank was fed in by feed rollers geared together, which pinched the board between them and forced them forward to the cylinder to be planed, the planks succeeding each other without intermission as they were successively presented by the person tending the machine. In this machine no carriage was used, but there was a stationary guide strip or straight edge, against which one edge of the board was held by means of spring pressure upon the opposite edge as described in the patent of Emmons. The cylinder run in boxes that could be raised or lowered so as to bring the cylinder nearer to, or further from, the bed on which the board was planed, and thus determine the thickness of the stuff after it had passed through the machine; the boxes

were raised and lowered by set screws above and below each box by which it could be adjusted.

Some time after we completed this Emmons machine, I first saw the machine of William Woodworth at the Dry Dock; this machine late in 1829 had its cylinder upright instead of horizontal, as it was in Emmons' machine. The cylinder was in permanent bearings which were not adjustable; the board was fed through the machine edge-ways, resting against a carriage driven by a rack and pinion, resting on rollers by which it was supported, as shown in the drawing that I have examined, attached to an official certified copy of Woodworth's patent issued to him in 1828. The cylinder in this machine had twelve knives on it when I first saw it, the knives were each attached to a bar of iron which was bent at right angles at both ends, and bolted to heads that formed the cylinder. We afterwards made at our machine shop a new cylinder for Mr. Woodworth for this machine with but three knives upon it, and applied it at the Dry Dock to the machine.

This machine, in use at the Dry Dock in the city of New York, as late as the latter part of 1829 or beginning of 1830, had the carriage as one of its constituent parts; there were no rollers which could have been used as feed rollers in it, and the thickness of the board was determined by the adjustment of the carriage. The machine was on the plan of the drawing attached to the certified copy of the patent above named.

Sometime in the year 1830, this machine, with parts of others which were partially constructed and abandoned, that I had previously seen at the Dry Dock, were brought to the shop of Fry & St. John, in Eldridge street, after being taken to pieces; the wrought iron parts were worked up, the cast iron broken up, and the wood work burned as useless.

Subsequently Mr. Woodworth adopted the style and devices of the Emmons machine, which, so far as I am acquainted, have been used to the present day.

The distinctive difference between the machine constructed

by Uri Emmons, and that of William Woodworth at that time, was, first, the employment of feed rollers instead of a carriage, by which the performance of the machine was more than doubled with one half of the labor to work it.

Secondly, the adjustable cylinder by which the thickness of the material planed was determined.

Thirdly, the guide strip and apparatus to hold the edge of the board up against it.

Fourthly, the arrangement of the driving drum and gearing of the parts connected therewith; all of which were parts of the first practical machine herein described and made under the direction of Uri Emmons. None of which were employed by William Woodworth on his machines until after the year 1829.

The first machine of Uri Emmons made at the shop of Fry & St. John, went to New Orleans and proved so satisfactory that three more of them were ordered the next year, which we made for the proprietors of Emmons' patent; and subsequently others were ordered from time to time, constructed on the plan of the first machine without material alteration, and in all essential particulars, like the machines now in use by the assignees of Woodworth's patent.

I have never since the year 1830, seen a machine constructed or at work on the plan of the machine of William Woodworth, at the Dry Dock, to which I have herein referred. And further this deponent saith not.

JAMES ST. JOHN.

Sworn to before me, this

22d day of May, 1856.

G. T. HAWS,

Com'r of Deeds.

And the said JAMES ST. JOHN, being further questioned, deposes and says, that the reason why the improvement introduced by Emmons in the feed, more than doubled the performance or work of the machine, and saved the labor of one man, is, that it was necessary to fasten the board on to the carriage in the Woodworth machine, and after the board was

planed it was necessary to stop the carriage long enough to unfasten and take off the board; the carriage then had to be started and run back to its first position, and then stopped long enough to put on another board and fasten it before starting again. The time thus lost by stopping and running back, was greater, and perhaps twice as great as the time actually occupied in planing under favorable circumstances. Whereas, when the feed rollers are used without a carriage, as in the said Emmons machine, the boards followed each other continuously, the forward end of the one touching the back end of the other; so the planing was actually continuous, no time whatever being lost. Again, as the board was fastened upon the carriage in the said Woodworth machine, it was necessary that a man should be stationed at the delivery end to unfasten and take it off, as well as a man at the receiving end to put it on and fasten it. Whereas, in the Emmons machine the board not being on a carriage, nor fastened to anything, fell immediately from the machine when planed, and required no man to remove it from the machine or unfasten it, but only a man to put the boards in, which one man did as fast as the cutters could do their work.

There was also another important difference between the said Woodworth's and Emmons' machine, not mentioned in the foregoing part of this affidavit. In the former, the cutters for making the tongues were so formed as only to cut out the rebates on the sides of them, but would not reduce or dress their edges; and those for forming the grooves were so constructed as not to dress or reduce the edge of the board at the sides of the groove. It therefore was necessary in using the said Woodworth machine, to saw the boards into strips of equal width from end to end, or they could not be tongued and grooved. Whereas, in the said Emmons machine, the tonguing and grooving cutters were so formed that they dressed and reduced all parts of the edges of the boards, so that if a board was introduced differing in width from end to end, the said board was reduced to the same width by the operation of these cutters, and the tongues and grooves were perfectly

made. Nearly all boards differ or diminish in width from end to end, and the said Emmons machines, without sawing, reduced any board just as it came from the saw mill to any equal width, and formed the tongue and groove upon it.

And further this deponent saith not.

JAMES ST. JOHN.

Sworn to before me, this

23d day of May, 1856.

T. STUYVESANT,

Comr. of Deeds.

THOMAS MULLEN'S AFFIDAVIT.

THOMAS MULLEN being duly cautioned and sworn, deposes and says, that he has constantly resided in the city of New York from early childhood, and that he is by trade a machinist. That since 1839, he has been almost constantly engaged in building, working, or superintending the operation of planing machines. That he is now foreman in Keith & Co's planing mills in the city of Brooklyn, and has at different times been foreman in the planing establishments of Throckmorton, Johnson and Wood, in the City of New-York. That he has also visited San Francisco in California, and has there set up and put in operation three planing machines, and for a time superintended their operation. That he is and has been familiar with what is called the Woodworth machine since 1839, having built, set up, and operated many of them; and is now superintending the operation of several, and keeping them in order. That he is familiar with the planing machines used in New York and the neighboring cities, as also in San Francisco, and has also seen them in South America. He further deposes and says, that he has now before him, a certified copy of the Woodworth patent of December 27th, 1828, with its drawings; and also a certified copy of the patent, with its drawings, granted to Uri Emmons, dated April 29th, 1829; that these copies are certified to be correct by the then acting Commissioner of Patents.

And this deponent further says, that the machines now, and for the last seventeen years, known as the Woodworth machine, are substantially the same as that patented to said Emmons in 1829, and described and clearly represented therein by drawings, except the form of the tonguer and groover. That in all his experience and observation, he has never seen a machine constructed as described or represented in Woodworth's said patent of 1828. That by the mode of feeding presented in Woodworth's patent and drawings, the machine must have been almost, if not quite useless in planing *boards or plank*, for which the machines of the present day, and ever since his acquaintance with the subject, have been almost exclusively used. That many of the boards and plank planed by the machine constructed as it has been since his acquaintance with it, to work like the Emmons patent, could not be planed on the machine presented in Woodworth's said patent, but would be broken and torn to pieces in the attempt; and others, even if planed, would require a great deal of time and trouble. Even those plank which are so even as to be most easily planed, could not be planed with half the speed with which they would be planed on the machine described in the said Emmons patent, and which as before stated, is substantially the machine of the present day. Feeding by a carriage as described and shown in the said Woodworth patent would be so slow, owing to the time required for *dogging*, or fastening and unfastening the board, and running back the carriage after planing each board, that it would be doubtful whether, taking every thing into consideration, it would not be quite as advantageous to plane by hand.

And deponent further says, that by throwing out the carriage of Woodworth, and introducing the rollers found in the Emmons patent, the planing is rendered perfectly continuous, and boards which could not be planed and reduced to uniform thickness upon a carriage, would be perfectly planed and reduced on the machine with Emmons' improvements, and with as much rapidity as smooth and even boards. Witness states that he thinks it evident that boards which are much

warped, winding or crooked, cannot be so placed upon a carriage as to be advantageously planed, and such boards are so numerous in every planing mill and lumber yard, and the time necessary to operate the carriage is so great, that deponent says, that sooner than carry the board forward to be planed on a carriage, he thinks he would return to planing by hand; at all events, the advantage of using a carriage machine, would be but little over hand planing.

Witness further states that the side guides, and adjustment of the planing cylinder, which he finds in the said Emmons patent, are not to be found in the said Woodworth patent, and these he had always regarded as indispensable, and they have been in universal use ever since the earliest knowledge of deponent on the subject.

And deponent further says, that upon a machine constructed like that described and represented in the said Emmons patent, boards and plank as they come from the saw mill and are found in the lumber yards, without selection, can be perfectly planed and reduced to uniform thickness at less than one twentieth (1-20) the expense of planing by hand.

And further this deponent saith not.

THOMAS MULLEN.

Sworn before me,

May 21, 1856.

JAMES M. SWEENEY,

Com'r of Deeds.

SAMUEL JOHNSON'S AFFIDAVIT.

SOUTHERN DISTRICT OF NEW YORK, ss.

City and County of New-York, ss.

In the matter of the extension of the patent granted to Uri Emmons for an improvement in the mode of planing floor plank, &c., &c., called the Cylindrical Planing Machine.

SAMUEL JOHNSON of the City of New-York, being duly sworn, saith, that he, this deponent is, and has been for twelve years last past, well and practically acquainted with the planing mills in operation in the City of New York and its

vicinity. This deponent is very familiar with the drawings and specifications annexed to the patent for the Cylindrical Planing Machine granted to Uri Emmons on the twenty-fifth day of April, 1829, and also with the drawings and specifications annexed to the patent granted to William Woodworth for a planing machine, dated 27th day of December, 1828.

This deponent hath worked to a very considerable extent as a machinist, in building, repairing, and superintending the planing machines commonly called the cylindrical planing machines, and which are the machines now in so general use; and hath been for seven months last past, superintendent of two such planing machines in West street in the City of New-York.

This deponent saith, that he is informed and believes that the said William Woodworth shortly after obtaining his patent, attempted to put into operation at the Dry Dock, in this City, a planing machine according to his said patent, and after many unsuccessful efforts to get the same into operation practically, the said concern at the Dry Dock was burned down. This deponent further saith, that he hath seen in the States of New York, Massachusetts, Rhode Island, New Jersey and Pennsylvania, about fifty cylindrical planing machines; and this Deponent saith, that he hath never seen a cylindrical planing machine, or heard of one, except that at the said Dry Dock, which was constructed upon the plan of the said Woodworth's patent; and that all the cylindrical planing machines which he hath ever seen, were in accordance with the plan and conform in their principle, construction, and mode of operation to the specifications and drawings of the said Uri Emmons' patent, with some minor improvements and additions not referred to in any of said plans or specifications.

This deponent further saith, that it is impossible for any mechanic to make a planing machine which will operate to any advantage, by conforming to the specifications and drawings annexed to the said Woodworth's patent.

And this deponent further saith, that no part or portion of

the method or machinery described in the specifications and drawings annexed to said Woodworth's patent for bringing the plank or other materials in contact with the knives or cutters, is used in the aforesaid cylindrical planing machines now in general use; but on the contrary, such contact is produced by means of a fixed bed plate, between which and the planing cylinder, the boards or plank are propelled along such bed, and brought into contact with the knives or cutters, by means of feeding rollers.

SAMUEL JOHNSON.

Sworn to this 25th day of
March, 1843, before me,

GEO. W. MORTON,

U. S. Com'r.

THOMAS HAWKINS' AFFIDAVIT.

SOUTHERN DISTRICT OF NEW-YORK, ss.

City and County of New York, ss.

THOMAS HAWKINS of the said City, Operative Engineer and Machinist, being duly sworn, says, that he, deponent hath superintended, repaired, and is well acquainted with the cylindrical planing machines referred to in the annexed affidavit of Samuel Johnson, and that he, this deponent, hereby concurs in all the statements therein contained as to the said cylindrical planing machine now in general use, being in accordance with the specifications and drawings annexed to the patent granted Uri Emmons; and the non-accordance of said machines as now in use, with the specifications and drawings annexed to William Woodworth's patent, and as to the impracticability of making a useful machine from the said drawings and specifications annexed to said Woodworth's patent for a planing machine.

THOMAS HAWKINS.

Sworn to this 25th day of
March, 1843, before me,

GEORGE W. MORTON,

U. S. Com'r.

STATEMENT

On file at the Patent Office, February, 1843, referred to in the annexed Petition of the ascertained value of URI EMMONS' improvement in the mode of planing Floor Plank, &c., &c., called the Cylindrical Planing Machine, viz:

To plane, tongue and groove 16 floor plank, is a reasonable day's work for a carpenter, which at the low average price of \$1.28 per day for his labor, is equal to 8 cents as the cost of planing, &c., each plank by manual labor. The planing mills are now performing the same work at the average price of 3 cents per plank, making a saving to the public of 5 cents per plank, and in consequence of the machines reducing the plank to a uniform thickness, nearly one half of the labor of laying them down in floors is saved, which is equal to the saving of $1\frac{1}{2}$ cents per plank, which added to the above said 5 cents, makes $6\frac{1}{2}$ cents saved to the public, in the cost of preparing each plank ready for floors. And as the average number of planks planed per day by each machine is 500, each machine saves to the public an expense of labor equal in value to \$32.50 per day, which, at the estimate of 300 working days per year, amounts to \$9,750 per annually. As near as can be at present ascertained, there are about from 130 to 150 of the planing machines in use in the United States, but assuming as the basis of calculation that only 100 machines are now steadily employed, it still appears that the value to the public of the labor saved by the 100 machines over and above the profits to the mill owners, is in amount per annually equal to

\$975,000 00

The cost to the mill owners of planing each plank, is (in a well conducted establishment,) about $1\frac{1}{2}$ cents; and as they receive on an average 3 cents for planing, the net profit to them is \$7.50 on each machine per day, or \$2,250 per year, and which on 100 machines, amounts to

- 225,000 00

Total value of the use of 100 machines, is per annually,

\$1,200,000 00

I think it not improbable but that at least 50 more machines may be put into operation within the next five or six years.

CALVIN EMMONS.

Executor of the Estate of Uri Emmons deceased.

The following was filed by W. W. Woodworth, administrator, in the Senate, among the papers of 1845. See Woodworth memorial, pages 52 and 54:

SCHEDULE D.

Statement of the profits accruing to the public from the use of W. Woodworth's Planing Machines, as near as can be ascertained from extensive and minute inquiries into the subject, viz:

It is estimated that there are in the United States about seven hundred of the machines in operation, capable each of dressing about three thousand feet of lumber per day, at an average cost of about five dollars per thousand; while the same work done by hand, taking prices in the District of Columbia at the average, is about twelve dollars; but admitting the difference less favorable to the machine labor, it cannot be exaggerated by the estimate of a saving to the public of four dollars the thousand, upon all the various kinds of lumber dressed; and upon that basis, the following calculation is made, viz:

700 machines.

3 thousand feet per day.

2,100

4 dollars per thousand.

8,400

300 working days.

2,520,000 per annum.

STATEMENT

Referred to in the annexed Petition of the expenditures of money and value of time bestowed by the late URI EMMONS on his improvement in the mode of planing floor plank, called the Cylindrical Planing Machine, in the completion and introduction thereof into use, viz :

Cash expended in building his first experimental machines in Syracuse, Onondaga county, New York, in 1823 and '24. - - - - -	\$1,500	00	
Value of about 8 months of his time bestowed on co. in Syracuse, - - - - -	500	00	
Time and money expended in making experiments and improvements on do., in 1825 and '26, - - - - -	300	00	
Time and money bestowed on do., at sundry times up to the date of his patent on the 25th day of April, 1829, - - - - -	650	00	
Cost of machines built after date of patent. - - - - -	1,000	00	\$3,950 00
Proceeds of sale of patent right, - - - - -	\$1,050	00	
Do. do. machines, - - - - -	1,200	00	2,250 00
Amount of expenditures over and above receipts, - - - - -			\$1,700 00

CALVIN EMMONS,

Executor of the Estate of Uri Emmons, deceased.

CITY, COUNTY AND STATE OF NEW YORK, ss.

On this 8th day of February, 1843, before the subscriber, a Commissioner of Deeds, personally appeared Calvin Emmons of the City and State of New York, executors of the estate of Uri Emmons, late of said City of New York, deceased, and made solemn oath, that he verily believes that the within and above, are true statements of the ascertained value of Uri Emmons' improvement in the mode of planing floor plank, &c., &c., and of the expenditures and receipts accruing therefrom; and that he is duly authorized as executor of the estate of the late Uri Emmons deceased.

WM. H. BOGARDUS,

Commissioner of Deeds.

[The affidavits of Messrs. Johnson and Hawkins, and the foregoing statements of Emmons, are certified copies from the Patent Office.]

ELIZABETH EMMONS' AFFIDAVIT.

ELIZABETH EMMONS being duly sworn, deposes and says as follows, viz :

I am the sister of the late Uri Emmons, inventor and patentee of the Planing Machine, and reside in the City of New York. In very early childhood I remember to have heard much conversation between my father and brothers in relation to this invention, but was too young to have any very definite understanding of the matter until the subject of getting the patent extended came to be spoken of. My brother Uri was very poor and in very bad health, and looked forward to the extension of this patent as the means of relieving the necessities of his family, and the necessities of his father, who had impoverished himself to aid him in completing his invention. But this consolation was not reserved for him. He died in great poverty a few years before the expiration of the patent, after long protracted illness, his wife having gone before him to the grave, and his only remaining child soon followed. My father thus became the heir of my late brother Uri, but being poor, infirm and old, my brother Calvin, who, if no richer, was stronger, was appointed administrator. He and my brother Phineas, both poor, made every exertion to obtain the means necessary to secure the extension of the patent, but it was impossible to obtain sufficient. My father and myself were both dependent principally upon my brother for support. A few persons advanced a little money, relying upon the extension for repayment; and my brother Calvin, a short time before the expiration of the patent, went to Washington with the slender means he could raise, to seek the long hoped for extension at the hands of the board of extensions. But being unable to employ counsel, and being unfamiliar with the mode of procedure, and having been misled by the want of proper counsel, and unsound advice from other sources, he failed, and returned home much depressed, to those who could give him no consolation, but could only participate in his disappointment without diminishing it. It appears that he found the representatives of Woodworth, with whom my

brother Uri had shared his invention, arrayed against him, and sustained by ample means; and this opposition appears always to have continued. So far has this opposition been carried, that my brother Calvin informed me, that while he was urging the extension of his own patent for improvements in threshing rice, which was upon the point of being passed in the House, having previously passed the Senate, Wm. W. Woodworth, the son of the inventor, then a member of the House, objected, and thus placed the matter so low on the calendar, that it was not reached. The extension of this rice threshing patent would have given my brother the means of pressing the application before Congress for an extension of the patent for the planing machine. This fact I did not observe myself, but it was matter of correspondence and conversation among us at the time, and was never doubted nor disputed.

After the failure to procure a favorable decision from the Board, in relation to Uri's patent, my brother Calvin, with the aid of my brother Phineas, and such other aid as he could obtain, took the earliest opportunity to place the subject before Congress, but poverty still crushed him down, and baffled his efforts. A report in his favor from time to time was obtained, but the action of *both* Houses never could be obtained. My brother had not the means to cause the merits of his case to be made known to any considerable number of members, thus to secure their aid, and was doomed year after year to disappointment, and became more and more embarrassed in his pecuniary affairs by the efforts beyond his means which he was making. His efforts were continued, however, until his spirit was broken and his health wasted, and in the winter of 1848, he returned home *to die*—to die in poverty.

After his death, my father William Emons, Sr., about *seventy years* of age, took the matter into his own hands, and knowing the justice of his cause, seemed to be sanguine of success. He had no means, not even enough to procure, without aid, the necessaries of life. But others promised to aid him for a portion of the extension if they should procure it.

To them the business was entrusted, but my father, after repeated sessions of Congress, without any apparent progress, came to the conclusion that they were not doing all that could be done. He could not go in person to Washington, because unable to command the means. But after seven years of unsuccessful application to Congress, those who had the business in charge, consented to furnish the funds to pay my father's expenses to Washington, and although 75 years old at the time, and broken by infirmities and disappointments, he went. A favorable report was the result, and its passage in the Senate. He returned to New York sanguine of success, but it was never reached in the House. This disappointment fell heavily upon him, He had scarcely where to lay his head; he was never again like himself—his hopes were blighted, his heart broken, and he soon found that quiet in the grave which had so long been denied him; and his aged wife soon followed him. The funeral expenses were defrayed by charity.

The humble graves of my father and brothers are not far from the valuable estates and splendid dwellings of some of the many who have grown rich out of my brother's invention, nor from a city to which it has probably saved more than ten millions of dollars, and in which it is still, and will ever continue on its errand of increasing usefulness.

I am a seamstress, having no other means of support, and my labor is destroying my health. The work in which I am now engaged will soon be suspended, leaving me to seek new employers from house to house.

My remaining brothers have nothing but their labor for their support.

From the beginning to the present time, no effort which the relations of my brother Uri have had the means of making has been omitted, which tended to secure the extension of his patent.

ELIZABETH EMMONS.

Sworn to before me, this
28th day of May, 1856.

WM. LEE, *Com'r of Deeds.*

AFFIDAVIT OF HON. D. L. SEYMOUR,

EX-MEMBER OF CONGRESS.

State of New York, Rensselaer County, ss. :

DAVID L. SEYMOUR, of Troy, in said county, being duly sworn, says, that he was a member of the 28th Congress, and that he distinctly recollects the occasion of the passing of a bill in the House of Representatives of said Congress for extending the Woodworth patent so called. This deponent who was then a member of the House of Representatives, was about to propose an amendment to said bill so as by the same bill also to extend the patent of one Emmons for a planing machine, when William W. Woodworth, whom this deponent then understood to be interested in said patent, and James G. Wilson whom this deponent understood to be the assignee thereof, called to see the deponent in relation to this deponent's contemplated opposition to the passage of said bill. This deponent further says, that as he verily believes, subsequently to the passage of said bill, which, as he verily believes, was in the year 1845, and on or about the 3d day of February, 1846, this deponent replied to a letter addressed to him on that subject by Hon. Dixon H. Lewis, then a member of the Senate of the United States. This deponent further says, that he did not to his knowledge or belief, keep any copy of the letter written by him in reply to said Lewis, but he verily believes that said letter is now on file among the papers of the United States Senate. And he further says, that the following has been presented to him as a copy of a statement contained in said letter of the substance of what transpired between him and said Woodworth and Wilson in relation to the said bill for the extension of the said Woodworth patent.

"Woodworth and Wilson having been made acquainted with my views and intentions, both called upon me, and most earnestly requested me not to propose such an amendment, inasmuch as at that late period of the session, and at that stage of the proceedings, they thought the effect of such a proposition would be the defeat of their bill.

"They then assured me that the claim of Emmons was entirely independent of that of Woodworth; that the extension of one would not at all interfere with the extension of the other. That they were willing that a bill for the extension of Emmons' patent should pass, and they assured me as honorable men that they would interpose no obstacles to such a bill. Under these circumstances, I forbore to propose the contemplated amendment."

And this deponent, both from his present recollection of the transaction and from the fact that in said letter he has no doubt that he endeavored to state the facts fully and truly, verily believes that said copy statement is true, and further says not.

DAVID L. SEYMOUR.

Sworn before me,

May 26, 1856.

EDWARD BRUST,

Com'r of Deeds, Troy, N. Y.

OPINION OF HENRY B. RENWICK, Esq.

No. 21 FIFTH AVENUE, NEW-YORK,

May 31, 1856.

TO MR. PHINEAS AND MISS ELIZABETH EMMONS.

As you desire me to name my opportunities for possessing a knowledge of mechanics and machines, I state that I have been engaged since my boyhood in various branches of civil and mechanical engineering almost continually; that I have been for some four and a half years a principal examiner in the United States Patent Office, and have since been from time to time, occupied in preparing specifications or acting as expert in patent cases; that before my appointment to the patent office, and since my resignation, and while there, I have devoted much time to the history of inventions, and have been accustomed to analyze, enquiring into the specialities of various contrivances, their practical effects and their differences from, or similarities to, other and apparently

kindred contrivances. This much in answer to your queries as to my pursuits.

At your request also, I have examined certified copies and drawings of the letters patent granted to William Woodworth on the 27th day of December, 1828, and also of the re-issued patent dated on the 8th day of July, 1845, granted to Wm. W. Woodworth, administrator in trust, and purporting to be for the same invention as the patent of December 27, 1828.

I am to a certain extent, familiar with the machine now in actual use, and commonly known as the Woodworth planing machine; have frequently observed such machines while in operation, and have examined into their construction.

The features of the rotating cutter cylinder and pressure rollers, the cutters revolving over an unyielding bed, and thus reducing the board to an even and determined thickness, features which have been determined judicially to be the invention of Mr. Woodworth, are found in such machines. In such machines, moreover, the board is fed or drawn forward under the cutters to be submitted to their action by means of rollers which gripe the board, and as they revolve, cause it to advance without the intervention of any carriage or feeding table, motion being communicated from the rollers by friction directly to the board itself.

This method of feeding is clearly set forth in the re-issued patent before cited, but is not claimed therein as the invention of Woodworth, who does not name or allude to it in the original patent granted to him, wherein, on the contrary, the board is described as being advanced to be submitted to the action of the cutting cylinder, by means of a travelling table or bed.

This latter mode of feeding is not, to my knowledge, now in use, and if applied on the so termed Woodworth machines would much impair their efficiency. First, by reducing the amount of work that could be performed in a given time. Second, by limiting the action of the machine to tolerably straight and unwarped straight grained boards. Thirdly, preventing the planing, tonguing and grooving of very thin

boards; and fourthly, by deteriorating the quality of the tongue, or else by planing poorly those parts of the boards near its edges. If the board could be adjusted and clamped fast to a carriage or moving table or bed, so that a warped surface at one end could be introduced beneath the pressure rollers, then after that board had been run through and planed, it would be necessary to stop the machine, remove the planed board, run the carriage back, stop the machine again, adjust and clamp another board, set the machine again in motion, and then commence planing. In such event, it would probably consume more time to run back the carriage, remove and adjust the boards than it would to plane them. A machine therefore, would not certainly do more than half the work that it now can do with a roller feed without any carriage or table whatever.

In the Woodworth original patent, no precise method for clamping the board to a feeding table is set forth, and I know of no such method of clamping which would not require much time, and impede or prevent either the action of the planing cylinder or the tonguing and grooving cutters. I therefore conclude that the board was merely to be laid on the table and shoved forward with it by means of a pin or dog resting against one end of the board. If this assumption be true, and such is the only practicable method, then a warped board would not be practically held until under the pressure rollers, and when so held it would tend to lift from the pin or dog, in which case it would cease to be fed or else it would be apt to slide sideways on the carriage, and be no longer held up firmly against the planing cylinder. If the board thus shoved by a dog was knotty, or very cross-grained, or warped in the direction of its length, it would tend to fly up from the bed in some cases, and either start away from the dog or break in pieces. Many boards of the ordinary run in lumber yards, have characteristics as above set forth, and such boards could only be planed by hand if a travelling carriage or platform were employed; but the system of feeding by rollers without a carriage, now in use, obviates all these objections.

If it were attempted to plane very thin boards on a carriage, they would tend to bow upwards away from the carriage between the dog and the rollers, so that they would break, and if held down at their edges by a system of clamps so as to remedy this difficulty, such clamps would prevent the action of the tonguing and grooving cutters. By the use of rollers only to clamp and feed as now practised, these difficulties are remedied or entirely removed.

If a travelling platform were now used as a feed in the Woodworth machine, and a board just as wide as that bed were adjusted thereon, the board, if of sufficient thickness and of good quality, could be well planed over its whole width; but the lower tonguing cutter would then of necessity overlap the edges of the platform, and if it were attempted to make it run so close to the platform as to form smooth edges on the lower side of the tongue, then would the cutter continually be cutting into the platform owing to the incessant vibration of the machine; but if the cutter did not run close to the platform the lower edge of the board would be ragged and uneven. If in order to remedy this defect, the platform were made narrower than the board, then that portion of the board which overlapped, would not be properly held up to the action of the planing cylinder, and would therefore be imperfectly planed; moreover, different beds of varying width, must be used with boards of different width, whereas, by employing a feed without a platform, boards of any width can in succession be planed and tongued and grooved without any change at all in the machine. The changing of platforms would require much time. The difficulties as to the use of the tonguing cutters in connection with a travelling platform, are small as compared with other difficulties before enumerated as incident to its employment; but they do, or rather would exist, and no such difficulty is found when feeding rollers without a platform are employed.

In the Woodworth machine as at present used, the feeding cylinder is adjustable with reference to the solid stationary bed against which the board is planed. By altering this adjustment so that the cylinder is nearer to or farther from this

bed, boards may be reduced to different thicknesses, or boards of varying thickness may be planed. In the original Woodworth patent no such adjustability is named or even hinted at, and although this feature is described in the re-issued patent of 1845, it is not therein claimed as being the invention of Woodworth; on the contrary, it is said in the original patent that "the *plank*" resting on "the carriage, may be set so as to reduce it to any thickness required," but my knowledge of mechanical devices does not extend so far as to be able to suggest any means by which such a "setting" could be accomplished, and I could only produce such an effect practically, by using carriages of different degrees of thickness, inserting and changing them as required. Such a method would be clumsy, complicated and practically useless when compared with the adjustability of the planing cylinder now in use on what are known as Woodworth machines, and no mechanic would employ the former method if he could on any reasonable terms obtain the right to use the latter.

In some Woodworth machines as at present built, the boards as they enter are adjusted to their place by an adjustable pressure on their edges, or rather on one edge, so that they as they are fed in, take a proper position, and are held there without any danger of moving sidewise. This feature is important, as it prevents side lash of the board, and ensures a rectilinear tongue and groove. No such pressure on the edges of the board is named or represented in the original Woodworth patent. When the board was planed on its flat there was no means provided for preventing a side-wise motion, and when planed while resting on edge, its own weight only held it upon rollers which supported its lower edge. If such side pressure as is now used, had been applied originally, it would have lessened some of the inconveniences incident to the use of a carriage, and such side pressure in the present machine is of the utmost importance in producing perfect tongues and grooves.

From these considerations, I deem all these changes and additions now made in, and applied to the Woodworth ma-

chines so called, and in common use at the present day, alterations from the originally patented machine, and additions made thereto, as of the utmost importance in the practical working of the machine, and if machines were now built after the description and drawings of the original patent they would not be of half the value that they now are. I make this statement under the supposition that the builder guided by the original patent should avail himself of all modern improvements in mere mechanical construction, not being controlled by the precise arrangement, or confined to the precise details described in the original specifications and drawings, but at liberty to depart therefrom in such points as modern experience shows would be advantageous.

I consider the abandonment of the travelling platform of the original Woodworth machine and the substitution therefore of clamping feed-rollers; the addition to that machine of adjustable side clamps; and the introduction of the feature of adjustability to the planing cylinder, when taken as a whole, to be features which improve the original machine to quite as great an extent as that machine itself was an improvement on machines for planing which were known before its invention. I am fully aware of the great value of the features of pressure rollers, unyielding bed, and rotating cutters, long since adjudged to be Woodworth's invention, and of the fact that they, or features producing similar results, are indispensable in modern planing machines, and the foregoing assertion is made with due regard to such a knowledge of the value of Woodworth's invention. But the additions and alterations herein set forth, are the elements which render the original Woodworth machine practical and adaptable to all ordinary use; they cause it to be quick and certain in its operation, they enable any ordinary workman to attend and operate it.

I have also at your request, carefully examined specifications and drawings of the letters patent for a planing machine granted to Uri Emmons on the 25th day of April, 1829, and in them there is clearly described the feed of the plank

or board, by means of rollers, without the use of any traveling platform or bed. In them, also, the rotating planing cylinder is clearly represented as adjustable by means of screws and boxes, with reference to its unyielding bed, and there is further minutely described therein, an apparatus, self-adjusting, yielding, and so contrived as to press firmly upon the sides of boards of different widths.

In a word these three great improvements which I have noted as giving practical efficiency to the present Woodworth machine are all clearly, distinctly and even minutely set forth in the Emmons patent of 1829, in substantially the same practical form in which they now exist in so termed Woodworth machines.

The feed rollers and adjustable cutter are described in the Woodworth re-issued patent of 1845, as component parts of a complete practical working machine, and such a course is usual in drawing up patents; but it is not pretended in that document that these parts were ever set forth in the original patent of 1828, or that they ever existed in the original machine, or that Woodworth ever invented them or even pretended or claimed to have invented them. On the contrary the claims in the re-issued patent of Woodworth have no reference to these three great improvements, and are not based upon the adjustability of the cutting cylinder, the feed rollers without a platform, or the side pressure on the edges of the board, but are grounded on other features which are adjudged to have been his invention, and are separate, distinct, and independent of the three important practical features of which I have been speaking throughout this letter.

I am, to some extent, acquainted with the decisions of the United States Courts in relation to the Woodworth patent, and judging from them and from the patents themselves, which have been carefully examined, it appears to me that it must be concluded that it is to Uri Emmons and his invention that the public are mainly indebted for the practical in

troduction of planing machines, and the many benefits that have occurred from their employment.

Very respectfully,

Your obedient servant,

HENRY B. RENWICK.

On this 31st day of May, A. D., 1856, before me personally came HENRY B. RENWICK, to me known, and who being by me duly sworn, did depose and say, that the contents of the foregoing letter or communication are true to the best of his knowledge and belief.

LOUIS N. GLOVER,

Com'r of Deeds

MEMORANDUM

Of Papers filed in the Senate of the United States, in the matter of the renewal of Uri Emmons' patent for improvements in Planing Machinery.

- A. W. EMMONS' Jr. affidavit, dated April 2d, 1846.
- B. THOS. B. STILLMAN's do. do. March 30 do.
- B. JAMES ST. JOHN's do. do. April 3 do.
- C. WILLIAM KEMBLE's do. do. March 28 do.
- D. JAMES RENWICK's do. do. Dec. 10 do.
- THOMAS W. WOOD's do. do. April 3 do.
- THOMAS AP THOMAS do. do. Aug. 29, 1842.

- No. 1. Specification of Uri Emmons' Patent [missing.]
- No. 2. Statement of Expenditures and Receipts. [missing.]
- No. 3. Oath of Calvin Emmons, 23d of February 1844. [missing.]
- No. 4. Affidavit of William Emmons do. do. [missing.]
- No. 5. do. do. do. July 6, 1843. [missing.]

Above Nos. 1, 2, 2, 4, 5, not to be found on file.

No. 6. Decision of Board of Patent Extensions, by Messrs. Webster and Penrose; Mr. Ellsworth dissenting, and giving his opinion thereon, April 25, 1843.

No. 7. Certificate of Messrs. Webster and Penrose, virtually reversing their former decision, upon further evidence being produced.

Petition of W. Emmons, Sr., administrator of Uri Emmons' estate, January 16, 1849. Referred to Committee on Patents. 1850, Jan 10 referred to Committee on Patents. Presented by Mr. Pearce

Affidavit of James St. John, November 9, 1848.

Do. Jonathan H. Gedney, do. 10, do.

In equity, U. S. Circuit Court, Baltimore, [Woodworth vs. Brown.]

Letter of Mr. Burke to Mr. Farrelly.

A. Ascertained value of the invention. Being on 100 machines \$1,200-000 per annum.

Statement of facts as shown by petitioner, &c.

Brief in the matter of renewal.

Statement of Calvin Emmons.

Letter from Hon. David L. Seymour, ex-member of Congress, [see page 56 herein,] stating that both Woodworth and his assignee admitted Emmons' claim to patent.

Petition of W. Emmons, Sr, administrator, June 8, 1852. Referred to Committee on Patents. 1852, December 13, re-committed to same committee.

Several Bills and printed Reports by Hon. Mr. Phelps, March 26 1844, [S. 139;] and February 24, 1845, [S. 143.] Mr. Lewis, May 4, 1846, [S. 172;] Mr. Westcott, February 18, 1847, [S. 165;] Mr. Chase, April 1854, [S. 310,] with reports by Hon. Mr. Lewis and Mr. Chase, in favor of renewal.

PAPERS FILED IN THE U. S. HOUSE OF REPRESENTATIVES.

Petition, 19th January, 1848.

No. 1. Copy of Specification of Patent, 25th April, 1829.

No. 2. Statement of Expenditures and Receipts.

A. C. Emmons' statement, showing \$2,925,000 per annum saved to the public on 300 machines, each planing 500 planks per day. Estimate, 600 to 800 planing machines in operation in the United States.

Affidavit of William Emmons that Uri Emmons never received over \$1000 for his invention.

Affidavit of W. Emmons, Jr., the original in Senate.

Do. Thomas B. Stillman, do. do.

Do. James Renwick, do. do.

Do. James St. John, do. do.

Do. Jonathan H. Gedney, 20th January, 1844, [original on file in the Senate;] was in employ of Woodworth, and had charge of the Dry Dock machine, 1829, January to October

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- Testimony of Messrs. Woodworth & Strong, the co-proprietor with Woodworth, [see Woodworth printed memorial, 1855, pages 34, 37, 38,] corroborating the testimony of the foregoing, showing that the experiments with their Dry Dock Machine, constructed with carriage and rack and pinion movement and the machines with metallic belts were failures, - - - 40
- James St. John's Affidavit, May 23d, 1856, who, under the direction of Uri Emmons, constructed and completed an Emmons Patent Machine, in the summer of 1829, which, upon trial, proved perfect, and who subsequently rebuilt a portion of, and applied the same to the Woodworth Dry Dock Machine, and who afterwards purchased the wood and iron parts of the same, with parts of others which had been abandoned, and worked up the iron and burned the wood work; and who subsequently furnished several more Emmons machines to the party who had purchased the first one, - - - 41
- Thomas Mullen's Affidavit, May 11, 1856, who has been engaged in building, superintending and operating Planing Machines in the State of New York and California, and seen them in South America since 1839, states that in his opinion, a machine constructed to be fed by carriage and rack and pinion movement, would have but little if any advantage over hand planing; that by employing the Emmons improvement as combined with planing machinery, the work can be done for 1-20 the cost of hand labor, - - - 45
- Samuel Johnson's testimony, 1843, on file in the Patent Office, and referred to by Commissioner Ellsworth, states that he had seen about fifty planing machines in several States; that all the machines that he ever saw, [except the Dry Dock, Woodworth machine.] conformed in their principle, construction and operation to Uri Emmons' patent, with some minor improvements not described by either Woodworth or Emmons. That he superintends a planing establishment in New York city, - - - 47
- Thomas Hawkins' Affidavit corroborates Johnson's testimony, is also referred to by Mr. Ellsworth in his opinion, - - - 49
- Statement, [1843,] showing that by incorporating the Emmons improvement into the Cylindrical Planing Machines, planks, boards, &c., can be planed and dressed in a better manner for $1\frac{1}{2}$ cents actual cost, than can be done by hand labor for 8c.; that by the use of each 100 machines for 300 days in the year, the value to the public of the labor saved, is \$1,200 000, - - - 50

- Statement of Mr. Woodworth, 1845, [Schedule D.] estimating the benefit to the public by the use of Planing Machines, - - - 51
- Statement of Expenditures and Receipts of Mr. Emmons, showing a loss of seventeen hundred dollars in constructing, perfecting, experimenting with and introducing his improvements into use, - - - - - 52
- Elizabeth Emmons' testimony, only sister of the inventor of the very valuable improvements in planing machinery, by which the public have been benefitted to the amount of millions of dollars, while she is under the necessity of seeking employment in the capacity of a New-York sewing girl, showing that the family and heirs of her brother Uri Emmons, have exerted all the efforts in their power, and expended all the means at their command, for the purpose of securing those just and equitable rights which our government have heretofore extended to other worthy inventors. That the heirs have done all they could, and been kept in a state of poverty and want, and that her brother and aged father have died martyrs in the cause. She still makes an appeal for simple justice, - - - - - 53
- Affidavit of Hon. D. L. Seymour, ex-member of Congress, May, 1856, stating that while Mr. Seymour was a member of Congress, a bill was pending proposing the renewal of the patent of Woodworth, when Mr. Seymour was about to offer an amendment with the view of extending the Patent of Emmons also; but that in consequence of the representations then made him by both Woodworth and Wilson, he was prevailed upon to withhold his intended amendment, both Woodworth and Wilson assuring Mr. Seymour, that the two inventions of Woodworth and Emmons were entirely distinct, that the renewal of the one would not interfere with the other; that they did not object to the Emmons extension, and would interpose no obstacles to the passing of a bill for that purpose. Letter also on file in Senate, - - - 56
- Opinion of Henry B. Renwick, Esq., Civil Engineer, for several years connected with the Patent Office as Examiner, and now United States government Inspector of Steam Vessels, Engines and Boilers, as to the utility and necessity of employing the improvements discovered by and patented to Mr Emmons, - - - 57

Heirs
of
Mr Emmons
praying permission to
apply to the Commissioner
of Patents for Extension
of Patent for Improvements
in Planing Machinery

July 2. 1856 Ref^d to the
Committee on Patents

1857 Feby 2 advt

Patents
Mr Kelly